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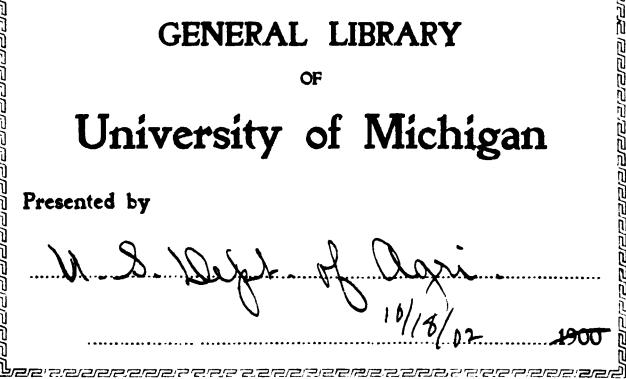
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U. S. DEPARTMENT OF AGRICULTURE,
DIVISION OF PUBLICATIONS—BULLETIN NO. 6.
GEO. WM. HILL, Editor.

LIST BY TITLES

OF

PUBLICATIONS

OF THE

UNITED STATES DEPARTMENT OF AGRICULTURE

FROM 1840 TO JUNE, 1901, INCLUSIVE.

COMPILED AND COMPARED WITH THE ORIGINALS

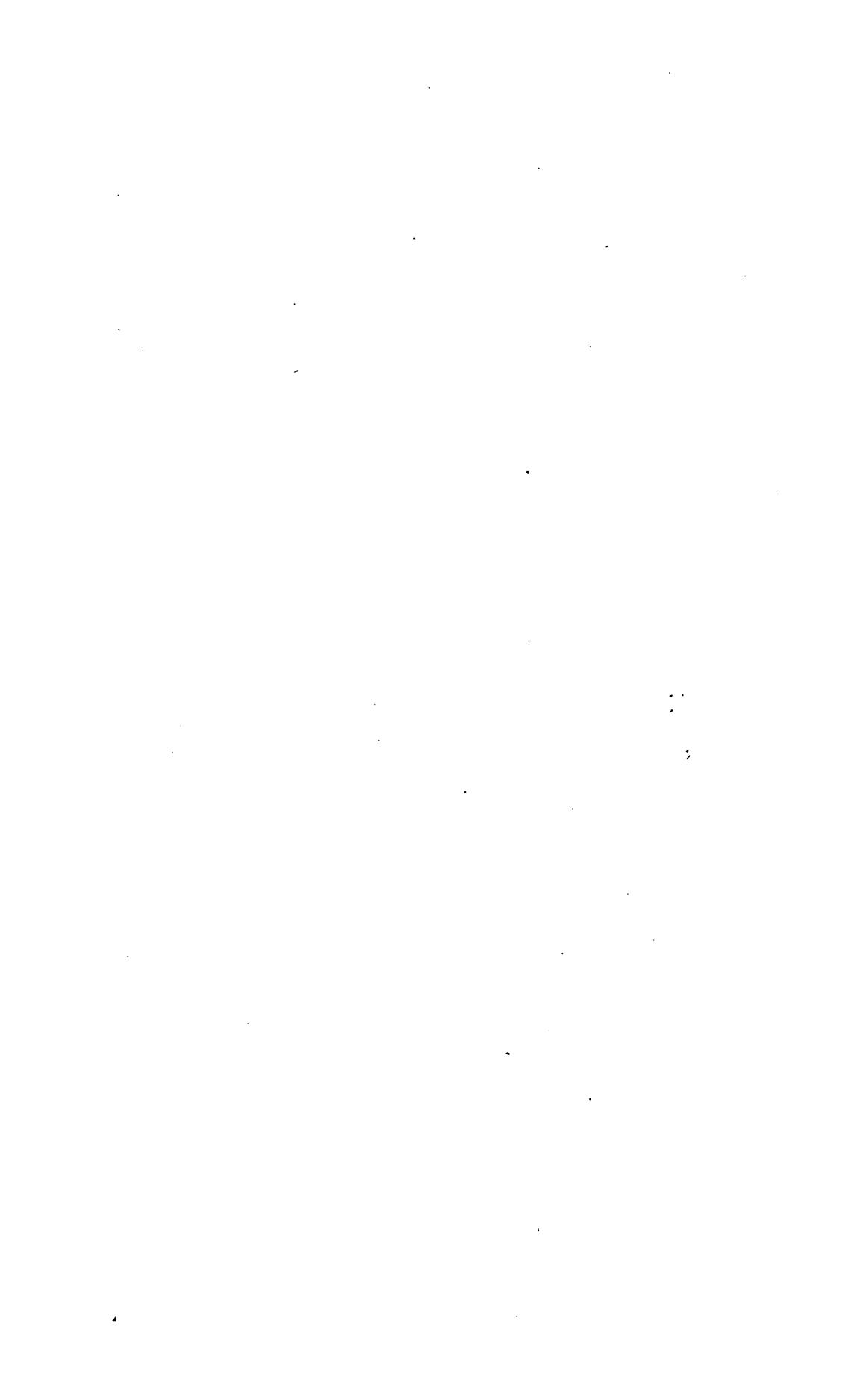
BY

R. B. HANDY and MINNA A. CANNON,
Document Section, Division of Publications.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1902.



LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
DIVISION OF PUBLICATIONS,
Washington, D. C., June 20, 1902.

SIR: I have the honor to transmit herewith the manuscript of A List of Publications of the United States Department of Agriculture from 1840 to June 30, 1901, and to recommend the publication of the same as Bulletin No. 6 of this Division. The need of an accurate and comprehensive list of the publications of the Department since its inception and organization is apparent. The preparation of the bulletin was intrusted to Mr. R. B. Handy, assistant in charge of the document section, who has had the assistance of Mrs. Minna A. Cannon, also of that section. The work has involved considerable time and labor and has all been done in addition to the regular routine work of the office. It is believed that the list will be found useful and valuable, indicating, as it does, the work and growth of the Department of Agriculture. In a publication of such magnitude it could hardly be expected that no errors have been made, and, with a view to their correction, it is hoped that any errors found may be brought to the attention of this office. Blank pages have been inserted at convenient places for adding new publications as issued and for annotations, etc.

GEO. WM. HILL, *Editor.*

Hon. JAMES WILSON,
Secretary of Agriculture.

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LIST BY TITLES OF PUBLICATIONS OF THE UNITED STATES DEPARTMENT OF AGRICULTURE, FROM 1840 TO JUNE, 1901, INCLUSIVE.

OFFICE OF THE SECRETARY.

ANNUAL REPORTS.

[The Department of Agriculture originated as a section of the Patent Office, by an appropriation for the collection of agricultural statistics, March 3, 1839; it became a separate Department May 15, 1862; was raised to the dignity of a Cabinet office February 9, 1889, when Norman J. Colman was appointed Secretary of Agriculture.]

Report of Commissioner of Patents, showing the operations during the year 1840.
(Henry L. Ellsworth.) Pp. 59.

Includes a note regarding the appropriation made in 1839 for statistics and other agricultural purposes on p. 2. Also in S. Doc. No. 152, 26th Congress, 2d session.

Report of Commissioner of Patents, showing the operations during the year 1841.
(Henry L. Ellsworth.) Pp. 27.

Includes a table of agricultural statistics as estimated for 1841, and remarks on agricultural statistics. Pp. 7-27. Also in H. Doc. No. 74, 27th Congress, 2d session.

Report of Commissioner of Patents, showing the operations during the year 1842.
(Henry L. Ellsworth.) Pp. 111.

Includes a tabular estimate of the crops for 1842 and agricultural statistics. Table of contents. Pp. 4-111. Also in H. Doc. No. 109, 27th Congress, 3d session.

Report of Commissioner of Patents, showing the operations during the year 1843.
(Henry L. Ellsworth.) Pp. 335.

Includes a tabular estimate of the crops for 1843 and statistical notes. Table of contents. Pp. 12-335. Also in H. Doc. No. 177, 28th Congress, 1st session.

Report of Commissioner of Patents, showing the operations during the year 1844.
(Henry L. Ellsworth.) Pp. 520.

Includes tabular estimates of the crops for 1844, statistical notes on agriculture, miscellaneous essays, and extracts from agricultural papers in appendices Nos. 1-44. Table of contents. Pp. 11-437. Also in S. Doc. No. 75, 28th Congress, 2d session.

Report of Commissioner of Patents, showing the operations during the year 1845.
(Edmund Burke.) Pp. 1184.

Includes a tabular estimate of crops for 1845, statistical notes, miscellaneous essays, and extracts from agricultural papers in appendices Nos. 1-40. Index. Pp. 90-1184. Also in H. Doc. No. 140, 29th Congress, 1st session.

The Commissioner of Patents failed to make an annual report on agriculture for 1846, Congress having failed to make an appropriation for this purpose. (See his report for 1847, p. 11.)

Report of Commissioner of Patents, showing the operations during the year 1847.
(Edmund Burke.) Pp. 661, pls. 8.

Tabular estimates of crops for 1847 and a series of 20 miscellaneous appendices on agricultural matters. Index. Pp. 84-661. Also in H. Doc. No. 54, 30th Congress, 1st session.

10 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

Report of Commissioner of Patents, showing the operations during the year 1848. (Edmund Burke.) Pp. 816, figs. 67.
Tabular estimates of crops for 1848 and 11 appendices. Index. Pp. 92-816. Also in H. Doc. No. 59, 30th Congress, 2d session.

Report of Commissioner of Patents for 1849, pt. 2, Agriculture. (Thomas Ewbank.) Pp. 574, pls. 7.
Also in S. Doc. No. 15, 31st Congress, 1st session.

Report of Commissioner of Patents for 1850, pt. 2, Agriculture. (Thomas Ewbank.) Pp. 579.
Also in H. Doc. No. 32, 31st Congress, 2d session.

Report of Commissioner of Patents for 1851, pt. 2, Agriculture. (Thomas Ewbank.) Pp. 676, pls. 10, figs 2.
Also in H. Doc. No. 102, 32d Congress, 1st session.

Report of Commissioner of Patents for 1852, pt. 2, Agriculture. (Silas H. Hedges.) Index. Pp. 448.
Also in H. Doc. No. 65, 32d Congress, 2d session.

Report of Commissioner of Patents for 1853, pt. 2, Agriculture. (Charles Mason.) Index. Pp. 418.
Also in H. Doc. No. 39, 33d Congress, 1st session.

Report of Commissioner of Patents for 1854, pt. 2, Agriculture. (Charles Mason.) Index. Pp. 520, pls. 8.
Also in H. Doc. No. 59, 33d Congress, 2d session.

Report of Commissioner of Patents for 1855, pt. 2, Agriculture. (Charles Mason.) Index. Pp. 488, pls. 12.
Also in H. Doc. No. 12, 34th Congress, 1st session.

Report of Commissioner of Patents for 1856, pt. 2, Agriculture. (Charles Mason.) Index. Pp. 536, pls. 50.
Also in H. Doc. No. 65, 34th Congress, 3d session.

Report of Commissioner of Patents for 1857, pt. 2, Agriculture. (J. Holt.) Index. Pp. 551, pls. 7.
Also in H. Doc. No. 32, 35th Congress, 1st session.

Report of Commissioner of Patents for 1858, pt. 2, Agriculture. (J. Holt.) Index. Pp. 552, pls. 8.
Also in H. Doc. No. 105, 35th Congress, 2d session.

Report of Commissioner of Patents for 1859, pt. 2, Agriculture. (William D. Bishop.) Index. Pp. 590, figs. 44.
Also in H. Ex. Doc., 36th Congress, 1st session.

Report of Commissioner of Patents for 1860, pt. 2, Agriculture. (S. T. Shugert, Acting Commissioner.) Index. Pp. 504, pl. 1, figs. 51.
Also in S. Ex. Doc., 36th Congress, 2d session.

Report of Commissioner of Patents for 1861, pt. 2, Agriculture. (D. P. Halloway.) Index. Pp. 656, figs. 125.
Also in H. Ex. Doc., 37th Congress, 2d session.

Report of Commissioner of Agriculture, 1862. (Isaac Newton.) Index. Pp. 632, pls. 47, figs 47.
Also in H. Doc. No. 78, 37th Congress, 3d session.

Report of Commissioner of Agriculture, 1863. (Isaac Newton.) Index. Pp. 698, pls. 47.
Also in H. Doc. No. 91, 38th Congress, 1st session

Report of Commissioner of Agriculture, 1864. (Isaac Newton.) Index Pp. 676, pls. 47, figs. 15.

Report of Commissioner of Agriculture, 1865. (Isaac Newton.) Index. Pp. 608, pls. 35, figs. 10.

Report of Commissioner of Agriculture, 1866. (Isaac Newton.) Index. Pp. 656, pls. 36, figs. 20.

Report of Commissioner of Agriculture, 1867. (John W. Stokes, Acting Commissioner.) Index. Pp. 512, pls. 37, figs. 12.
Contains author, title, and subject index for reports of agriculture from 1847 to 1866, inclusive.

Report of Commissioner of Agriculture, 1868.^a (Horace Capron.) Index. Pp. 671, pls. 19, figs. 10.

Report of Commissioner of Agriculture, 1869. (Horace Capron.) Index. Pp. 702, pls. 45, figs. 5.

Report of Commissioner of Agriculture, 1870. (Horace Capron.) Index. Pp. 688, pls. 31, figs. 59.

Report of Commissioner of Agriculture, 1871. (Frederick Watts.) Index. Pp. 524, pls. 26, figs. 26.

Report of Commissioner of Agriculture, 1872. (Frederick Watts.) Index. Pp. 524, pls. 12, figs. 44.

Report of Commissioner of Agriculture, 1873. (Frederick Watts.) Index. Pp. 496, figs. 21.

Report of Commissioner of Agriculture, 1874. (Frederick Watts.) Index. Pp. 463, pls. 7, figs. 20.

Report of Commissioner of Agriculture, 1875. (Frederick Watts.) Index. Pp. 536, pls. 61, figs. 70.

Report of Commissioner of Agriculture, 1876. (Frederick Watts.) Index. Pp. 447, pls. 15, figs. 64.

Report of Commissioner of Agriculture, 1877. (William G. Le Duc.) Index. Pp. 592, pls. 38, map 1, diagrams 13.

Report of Commissioner of Agriculture, 1878. (William G. Le Duc.) Index. Pp. 608, pls. 53, maps 2, diagrams 3.

Report of Commissioner of Agriculture, 1879. (William G. Le Duc.) Index. Pp. 621, pls. 53, map 1, chart 1, diagram 1.

Report of Commissioner of Agriculture, 1880. (William G. Le Duc.) Index. Pp. 672, pls. 130, figs. 21.

Report of Commissioner of Agriculture, 1881-82. (George B. Loring.) Index. Pp. 704, pls. 58, chart 1, diagrams 6.

Report of Commissioner of Agriculture, 1883. (George B. Loring.) Index. Pp. 496, pls. 43, map 1, diagrams 9.

Report of Commissioner of Agriculture, 1884. (George B. Loring.) Index. Pp. 581, pls. 41, map 1, diagrams 27.

Report of Commissioner of Agriculture, 1885. (Norman J. Colman.) Index. Pp. 640, pls. 41, figs. 9, map 1, diagrams 3.

^aIn 1868 the custom of printing desultory essays in the annual reports of the Commissioner was abandoned, and the annual reports of the Department of Agriculture included only reports of the Commissioner and of the division officers and special agents of the Department, included under the report of the editor of the annual digests of the researches of the office.

12 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

Report of Commissioner of Agriculture, 1886. (Norman J. Colman.) Index. Pp. 719, pls. 66, figs. 2, maps 2, diagrams 2.

Report of Commissioner of Agriculture, 1887. (Norman J. Colman.) Index. Pp. 724, pls. 61, figs. 4, diagrams 9.

Report of Commissioner of Agriculture, 1888. (Norman J. Colman.) Index. Pp. 708, pls. 63, map 1.

First Report of the Secretary of Agriculture, 1889. (Preliminary. J. M. Rusk.) Pp. 40.

Report of the Secretary of Agriculture, 1889. (J. M. Rusk.) Index. Pp. 560, pls. 44.

Report of the Secretary of Agriculture, 1890. (Preliminary. J. M. Rusk.) Pp. 52.

Report of the Secretary of Agriculture, 1890. (J. M. Rusk.) Index. Pp. 612.

Report of the Secretary of Agriculture, 1891. (Preliminary. J. M. Rusk.) Pp. 59.

Report of the Secretary of Agriculture, 1891. (J. M. Rusk.) Index. Pp. 653, pls. 57, maps 2.

Report of the Secretary of Agriculture, 1892. (Preliminary. J. M. Rusk.) Pp. 64.

Report of the Secretary of Agriculture, 1892. (J. M. Rusk.) Index. Pp. 656, pls. 71.

Report of the Secretary of Agriculture, 1893. (Preliminary. J. Sterling Morton.) Pp. 48.

Report of the Secretary of Agriculture, 1893. (J. Sterling Morton.) Index. Pp. 608, pls. 29, figs. 7.

YEARBOOKS OF THE DEPARTMENT OF AGRICULTURE.

[Beginning with 1894, the annual report of the Secretary contains the annual reports of the chiefs of divisions, and all supplementary scientific material is published in a yearbook for more general distribution. Section 73 of the act providing for the public printing and binding and the distribution of public documents is as follows: "The Annual Report of the Secretary of Agriculture shall hereafter be submitted and printed in two parts, as follows: Part 1, which shall contain purely business and executive matter which it is necessary for the Secretary to submit to the President and Congress. Part 2, which shall contain such reports from the different bureaus and divisions and such papers prepared by their special agents, accompanied by suitable illustrations, as shall, in the opinion of the Secretary, be specially suited to interest and instruct the farmers of the country, and to include a general report of the operations of the Department for their information. There shall be printed of part 1, one thousand copies for the Senate, two thousand copies for the House, and three thousand copies for the Department of Agriculture; and of Part 2, one hundred and ten thousand copies for the use of the Senate, three hundred and sixty thousand copies for the use of the House of Representatives, and thirty thousand copies for the use of the Department of Agriculture, the illustrations for the same to be executed under the supervision of the Public Printer, in accordance with directions of the Joint Committee on Printing, said illustrations to be subject to the approval of the Secretary of Agriculture, and the title of each of the said parts shall be such as to show that such is complete in itself."]

Report of the Secretary of Agriculture, 1894. (Preliminary. J. Sterling Morton.) Pp. 75.

Report of the Secretary of Agriculture, 1893-94, being part of the message and documents communicated to the Houses of Congress at the beginning of the third session of the Fifty-third Congress. Index. Pp. 220. 1895.

Yearbook of the Department of Agriculture, 1894. Index. Pp. 608, pls. 7, figs. 140. 1895.

Report of the Secretary of Agriculture, 1895. (Preliminary. J. Sterling Morton.) Pp. 64. 1895.

Report of the Secretary of Agriculture, 1895, being part of the message and documents communicated to the two Houses of Congress at the beginning of the first session of the Fifty-fourth Congress. Pp. 266, chart 1. 1895.

Yearbook of the Department of Agriculture, 1895. Index. Pp. 656, frontispiece, pls. 10, figs. 134. 1895.

Report of the Secretary of Agriculture, 1896. (Preliminary. J. Sterling Morton.) Pp. 51. 1896.

Report of the Secretary of Agriculture, 1896, being part of the message and documents communicated to the two Houses of Congress at the beginning of the second session of the Fifty-fourth Congress. Pp. i-ii, 269, diagram 1. 1897.

Yearbook of the Department of Agriculture, 1896. Index. Pp. 686, frontispiece, pls. 6, figs. 164. 1897.

Report of the Secretary of Agriculture, 1897. (Preliminary. James Wilson.) Pp. 54. 1897.

Annual Reports of the Department of Agriculture for the fiscal year ended June 30, 1897. Pp. liv, 226. Report of the Secretary of Agriculture, i-liv. Miscellaneous reports, 1-226. 1897.

Yearbook of the Department of Agriculture, 1897. Pp. 792, frontispiece, pls. 40, figs. 45. 1898.

Report of the Secretary of Agriculture, 1898. (Preliminary. James Wilson.) 1898.

Annual Reports of the Department of Agriculture for the Fiscal Year ended June 30, 1898. Pp. i-lxiii, 212. Cloth. 1899.

Yearbook of the Department of Agriculture, 1898. Index. Pp. 768, frontispiece, pls. 41, figs. 136. 1899.

Report of the Secretary of Agriculture, 1899. (Preliminary. James Wilson.) Pp. 68. 1899.

Annual Reports of the Department of Agriculture for the Fiscal Year ended June 30, 1899. Pp. i-lxx, 266. Cloth. 1900.

Yearbook of the Department of Agriculture, 1899. Index. Pp. 880, frontispiece, pls. 63, figs. 33. 1900.
Special edition in extra binding for distribution at the Paris Exposition.

Report of the Secretary of Agriculture, 1900. (Preliminary. James Wilson.) Pp. 76. 1900.

Annual Reports of the Department of Agriculture for the Fiscal Year ended June 30, 1900. Pp. i-lxxviii, 1-297. Cloth. 1901.

Yearbook of the Department of Agriculture, 1900. Index. Pp. 888, frontispiece, pls. 87, figs. 88. 1901.

SPECIAL REPORTS.

Report upon Forestry, 1877. Prepared under the direction of the Commissioner of Agriculture in pursuance of an act of Congress approved Aug. 15, 1876. By Dr. Franklin B. Hough. Vol. 1. Index. Pp. 650. 1878.

Sheep Husbandry in the United States. Pp. 130. 1879.

In S. Ex. Doc. No. 25, 45th Congress, 3d session. Same with additional remarks on Angora Fleece. Pp. 133. 1880.

Contagious pleuro-pneumonia, or Lung Plague of Cattle: Where and to what extent it exists. Pp. 17. 1879.

In S. Mis. Doc. No. 7, 46th Congress, 2d session.

14 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

Report upon Forestry, 1878-79. By Dr. Franklin B. Hough. Prepared under the direction of the Commissioner of Agriculture, in pursuance of an act of Congress approved Aug. 15, 1878. Vol. 2. Index. Pp. 618. 1880.

Report on Forestry, submitted to Congress by the Commissioner of Agriculture. Prepared by Dr. Franklin B. Hough. Vol. 3. Index. Pp. 318. 1882.

Report on Forestry, 1884. Prepared by Nathaniel H. Egleston. Vol. 4. Index. Pp. 421, map. 1884.

Report upon an Examination of Wools and Other Animal Fibers. By William McMurtrie. Pp. 613, pls. 9. 1886.

This report is based upon a collection of wools and other animal fibers exhibited at the International Exhibition of Sheep, Wool, and Wool Products, held at Philadelphia, 1880. In H. M. Doc. No. 392, 49th Congress, 1st session.

Special Report on Tea Raising in South Carolina. By C. U. Shepard. (Reprinted from Report of the Secretary of Agriculture for 1892.) Pp. 13, pls. 3. 1893.

Special Report on the Beet-Sugar Industry in the United States, 1897. Part 1, by H. W. Wiley, Chemist of the U. S. Department of Agriculture. Part 2, by Charles F. Saylor, Field Agent. (Printed by resolution of Congress.) Pp. 240, pls. 2. 1898.

Analyses of Sugar-Beets Grown in Various States. By Harvey W. Wiley, Chemist. Pp. 135-160, from House Doc. No. 396, 55th Congress, 2d session. 1898.

Beet-Sugar Industry in the United States. Report of Special Agent Charles F. Saylor. Pp. i-iv, 161-233, from House Doc. No. 396, 55th Congress, 2d session. 1898.

Special Report on the Market for American Horses in Foreign Countries. Pp. 94, pls. 6. (Printed by resolution of Congress.) 1899.

A report on the American trade in horses, descriptions of the kinds of horses needed in European countries, and suggestions to American breeders as to breeding horses for foreign markets. Compiled principally from reports of the United States consular officers.

Progress of the Beet-Sugar Industry in the United States in 1898. Pt. 1, by Charles F. Saylor, Special Agent. Pt. 2, by H. W. Wiley, Chemist of the U. S. Department of Agriculture. (Printed by resolution of Congress.) Pp. 162. 1899.

Progress of the Beet-Sugar Industry in the United States in 1899, with a Supplementary Report on the Cane-Sugar Industry of the Hawaiian Islands. By Charles F. Saylor, Special Agent, and H. W. Wiley, Chemist, U. S. Department of Agriculture. Pp. 200, pls. 4, fig. 1. (Printed by resolution of Congress.) 1900.

MISCELLANEOUS SPECIAL REPORTS.

No. 1. Forestry in the United States. Address of the Hon. George B. Loring, Commissioner of Agriculture, before the American Forestry Congress, St. Paul, Minn., Aug. 8, 1883. Pp. 41. 1883.

No. 2. Proceedings of a Convention (the second) of Agriculturists, Washington, Jan. 23, 24, 25, 26, 27, and 29, 1883. Index. Pp. 245. 1883.

No. 3. Mississippi: Its Climate, Soil, Productions, and Agricultural Capabilities. By A. B. Hurt, Special Agent. Pp. 89. 1883.

No. 4. The Climate, Soil, Physical Resources, and Agricultural Capabilities of the State of Maine, with Special Reference to the Occupation of Its New Lands. By S. L. Boardman, State Agent for Maine for the Department of Agriculture. Pp. 60. 1884.

No. 5. The Proper Value and Management of Government Timber Lands, and the Distribution of North American Forest Trees. Being papers read at the United States Department of Agriculture, May 7-8, 1884. Pp. 47. 1884.

No. 6. Address of Hon. George B. Loring, U. S. Commissioner of Agriculture, at the National Convention of Cattle Breeders, Chicago, Ill., Nov. 13, 1884; also the Report of the Veterinary Inspector in New York. Pp. 21. 1884.

✓ No. 7. Tide Marshes of the United States. By D. M. Nesbit; with Contributions from Coast Survey. By S. L. Boardman, Eldridge Morse, and others. Index. Pp. 259. 1885.

No. 8. Cotton in the Empire of Brazil; the Antiquity, Methods, and Extent of Its Cultivation; together with Statistics of Exportation and Home Consumption. By J. C. Branner. Pp. 79. 1885.

No. 9. Proceedings of a Convention of Delegates from Agricultural Colleges and Experiment Stations, held at the Department of Agriculture, July 8 and 9, 1885. Pp. 196. 1885.

No. 10. Descriptive Catalogue of the Manufactures from Native Woods, as Shown in the Exhibit of the Department of Agriculture at the World's Industrial and Cotton Exposition at New Orleans, La. By Charles Richards Dodge. Index. Pp. 84. 1886.

REPORTS.

[Since its establishment in 1862 the Department of Agriculture has issued various publications of a miscellaneous character not properly belonging to any of its established series, which have, up to the present time, remained practically unclassified. It is now proposed to bring all these miscellaneous publications together into a series, to assign numbers to those which have heretofore been referred to as "unnumbered reports," and to continue the series as Reports of the U. S. Department of Agriculture.]

No. 1. Circular from the Commissioner of Agriculture of the United States (Isaac Newton) on the Present Agricultural, Mineral, and Manufacturing Condition and Resources of the United States. Pp. 8. 1862.

No. 2. Catalogue of the Plants, Bulbs, Tubers, etc., for Distribution from the U. S. Propagating Garden, with a Report on the Objects and Aims of the Garden. By William Saunders, Superintendent of Experimental Gardens. Pp. 8. 1862.

No. 3. Report on the Chemical Analysis of Grapes, Submitted to Hon. Isaac Newton, Commissioner of Agriculture, by Charles M. Wetherill, Ph. D., M. D., Chemist of the Department. Pp. 6. 1862.

No. 4. List of the Agricultural, Horticultural, and Pomological Societies, Farmers' Clubs, etc., on the Books of the Department of Agriculture, July 1, 1870, together with the president and secretary of each. Pp. 47. 1870.

No. 5. List of Agricultural Colleges and Farmers' Clubs, and Agricultural, Horticultural, and Pomological Societies on the Books of the Department of Agriculture. Pp. 66. 1872.

No. 6. Descriptive Catalogue of Plants in the Exotic Collection of the Department of Agriculture. Prepared by William Saunders, Superintendent of Gardens and Grounds. Pp. 51. 1872.

No. 7. The Department of Agriculture: Its History and Objects. By J. M. Swank, Chief Clerk of the Department. Pp. 64. 1872.

No. 8. Culture and Manufacture of Ramie and Jute in the United States. By Emile Lefranc, of New Orleans. Pp. 19. 1873.

No. 9. The Eucalyptus Globulus, from a Botanic, Economic, and Medical Point of View, Embracing its Introduction, Culture, and Uses. Translated from the French of J. E. Planchon, Professor of the Faculty of Montpellier, France, with an introduction. Pp. 20. 1875.

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No. 10. The Planter's Guide to Cultivating and Curing Tobacco; with Information and Instruction concerning the Shelton Tobacco Hanger. Prepared by the Shelton Tobacco-Curing Company of Asheville, N. C. Pp. 24. 1876.

No. 11. Catalogue of the Forest Trees of the United States Which Usually Attain a Height of 16 Feet or More, with Notes and Brief Descriptions of the More Important Species. Pp. 38. 1876.

No. 12. List of Agricultural Societies and Farmers' Clubs, Established to promote the Agricultural, Horticultural and Pomological Interests of the Farmer, on the Books of the Department of Agriculture, July 4, 1876, being the Centennial Year of American Independence; together with a list of Agricultural Colleges. Pp. 63. 1876.

No. 13. Statement of Appropriations and Expenditures of the Department of Agriculture from 1839 to 1877, inclusive. Pp. 18. 1877.

No. 14. A General Index of the Agricultural Reports of the Patent Office for Twenty-five Years, from 1837 to 1861, and of the Department of Agriculture for Fifteen Years, from 1862 to 1876. By the Commissioner of Agriculture (William G. Le Duc). Pp. 225. 1879.

No. 15. Circular Letter from the Commissioner of Agriculture Relative to the Manufacture of Maize and Sorghum Sugars. Pp. 21. 1879.

No. 16. Letter of the Commissioner of Agriculture to the Hon. Jno. W. Johnston, Chairman of the Committee on Agriculture, on Sorghum Sugar. Pp. 42, pls. 33. 1880.

No. 17. Address of Hon. George B. Loring, Commissioner of Agriculture, and Other Proceedings of the Cotton Convention Held in Atlanta, Ga., November 2, 1881. Pp. 35. 1881.

No. 18. Fertilizers: Cooperative Experimenting as a Means of Studying the Effects of Fertilizers and the Feeding Capacities of Plants. By Prof. W. O. Atwater. Pp. 33. 1882.

No. 19. Artesian Wells upon the Great Plains; Being the Report of a Geological Commission Appointed to Examine a Portion of the Great Plains East of the Rocky Mountains, and to Report upon the Localities Deemed Most Favorable for Making Experimental Borings. Pp. 38, map 1. 1882.

No. 20. Report on the Climatic and Agricultural Features and the Agricultural Practice and Needs of the Arid Regions of the Pacific Slope, with Notes on Arizona and New Mexico. Made under the direction of the Commissioner of Agriculture by E. W. Hilgard, T. C. Jones, and R. W. Furnas. Index. Pp. 182. 1882.

No. 21. Florida: Its Climate, Soil, Productions, and Agricultural Capabilities. By George B. Carse and James H. Foss. Pp. 98. 1882.

No. 22. Proceedings of a Convention of Agriculturists held in the Department of Agriculture, January 10 to 18, 1882. Pp. 204. 1882.

No. 23. Area and Product of Cereals Grown in 1879, as Returned by the Census of 1880. Pp. 97. 1883.

No. 24. Culture of the Date. By W. G. Klee, Gardener in Charge of Agricultural Grounds, University of California. Pp. 25. 1883.

No. 25. "The Necessity of Agricultural Education." An Address Delivered by Augustine J. Smith, President of the Maryland Agricultural College, before the Convention of Presidents and Professors of Agricultural Colleges, and Other Distinguished Representatives of Agriculture, Assembled at Washington City, January 23, 1883, in Invitation of the Commissioner of Agriculture. Pp. 15. 1883.

No. 26. Encouragement to the Sorghum and Beet Sugar Industry. A Record of Practical Experiments Conducted under the Direction of the Commissioner of Agriculture. Pp. 64. 1883.

No. 27. Investigation of Sorghum as a Sugar-Producing Plant. Season of 1882. By Peter Collier, Chemist. Index. Pp. 68, diagram 1. 1883.

No. 28. Preliminary Report on the Forestry of the Mississippi Valley. By F. P. Baker. Tree Planting and Growing on the Plains. By Robert W. Furnas. Pp. 45. 1883.

No. 29. Proceedings of a National Convention of Cattle Breeders and Others called in Chicago, Illinois, November 15 and 16, 1883, by the Hon. Geo. B. Loring, Commissioner of Agriculture, to Consider the Subject of Contagious Diseases of Domestic Animals. Index. Pp. 85. 1883.

No. 30. Report on Jute Culture and the Importance of the Industry. By Prof. S. Waterhouse, St. Louis, Mo. Pp. 21. 1883.

No. 31. Results of Field Experiments with Various Fertilizers. By Prof. W. O. Atwater, Ph. D. Pp. 183. 1883.

No. 32. The Agricultural Grasses of the United States. By Dr. George Vasey, Botanist of the Department of Agriculture. Also, the Chemical Composition of American Grasses. By Clifford Richardson, Assistant Chemist. Index. Pp. 144, pls. 120. 1884.
Same, revised and enlarged. Pp. 148, pls. 114. 1889.

No. 33. Report of the Proceedings of the National Convention of Cattle Breeders and Others, at Chicago, November 14, 1884. By G. B. Loring, Commissioner of Agriculture. Pp. 21. 1884.

No. 34. Microscopic Observations. By Thomas Taylor, M. D. Internal Parasites in Domestic Fowls, and Butter Fats. Pp. 7, pl. 1. 1884.

No. 35. The Soils and Productions of Southwestern Louisiana, including the Parishes of St. Landry, Lafayette, Vermilion, St. Martin, Iberia, and St. Mary. By E. E. Rapley, Special Agent. Pp. 40. 1884.

No. 36. Report on the Organization and Management of Seven Agricultural Schools in Germany, Belgium, and England, made to Hon. Geo. B. Loring, U. S. Commissioner of Agriculture. By A. S. Welch, LL. D. Pp. 107. 1885.

No. 37. Address of Norman J. Colman, Commissioner of Agriculture, before the Convention of Agricultural Colleges and Experimental Stations, Washington, D. C., July 8, 1885. Pp. 17. 1885.

No. 38. Addresses of Hon. Norman J. Colman, U. S. Commissioner of Agriculture, and Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, before the Third National Convention of Stockmen, held at Chicago, Ill., November 17 and 18, 1885. Pp. 29. 1885.

No. 39. A Directory of Departments, Boards, Societies, Colleges, and Other Organizations in the Interest of Agriculture, Horticulture, Stock-raising, Dairying, Bee-keeping, Fish-culture, and Kindred Industries. April, 1885. Pp. 88. 1885.

No. 40. Agricultural Graphics. A Report of Exhibits Illustrating Agricultural Statistics at the World's Industrial and Cotton Exposition at New Orleans, La. By J. R. Dodge, Statistician of the Department of Agriculture. Pp. 42, diagrams 27. 1885.

No. 41. Report on the Condition of Dairying in the Principal Dairy States for the Season of 1885. By Allen Dodge. Pp. 35. 1886.

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No. 42. Supplement to the General Index of the Agricultural Reports, 1877-1885. Pp. 113. 1886.

No. 43. Addresses of Hon. Norman J. Colman, U. S. Commissioner of Agriculture, and Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, delivered before the National Cattle Growers' Convention, held at Kansas City, Mo., October 31, and November 1 and 2, 1887. Pp. 11. 1887.

No. 44. Rules and Regulations of the United States Department of Agriculture for the Suppression and Extirpation of all Contagious, Infectious, and Communicable Diseases among the Domestic Animals of the United States. Prepared by the Commissioner of Agriculture. (Norman J. Colman.) Pp. 7. 1887.

No. 45. Association of American Agricultural Colleges and Experiment Stations. Convention held at the Department of Agriculture, Washington, D. C., October, 1887. Pp. 32. 1888.

No. 46. Hog Cholera: Its History, Nature, and Treatment, as determined by the Inquiries and Investigations of the Bureau of Animal Industry. Index. Pp. 197, pls. 16. 1889.

No. 47. Catalogue of Economic Plants in the Collection of the U. S. Department of Agriculture. By William Saunders. Pp. 42. 1891.

No. 48. Papers on Horticultural and Kindred Subjects, by William Saunders, Horticulturist and Landscape Gardener, Superintendent of Gardens and Grounds, U. S. Department of Agriculture. Reprinted from Reports of the Department of Agriculture, 1863-1889. Index. Pp. 124. 1891.

No. 49. Report on the Use of Maize (Indian Corn) in Europe and on the Possibilities of its Extension. 1. The Introduction of Maize into Europe. By Charles J. Murphy, Special Agent. 2. The Food Value of Maize. By Dr. H. W. Wiley, Chief Chemist. 3. The Indian Corn Industry in the United States. By B. W. Snow, Assistant Statistician. Pp. 36. 1891.

Same, German edition (containing only parts 2 and 3 as given in the English edition.) Pp. 23. 1892.

Same, French edition (pts. 2 and 3). Pp. 22. 1892.

Same, Spanish edition (pts. 2 and 3). Pp. 24. 1892.

Same, Scandinavian edition (pts. 2 and 3). Pp. 22. 1892.

No. 50. Progress Report on the Dairy Industry of Denmark. By Prof. C. C. George-
son, Special Agent of the U. S. Department of Agriculture. Pp. 14. 1893.

No. 51. Studies of Parasitic and Predaceous Insects in New Zealand, Australia, and
Adjacent Islands. Made by A. Koebele, of the U. S. Department of Agriculture, by permission of the Secretary of Agriculture, at the request of the California State Board of Horticulture. Pp. 39. 1893.

No. 52. Indian Corn (or Maize) in the Manufacture Beer. By Robert Wahl, Ph. D. Pp. 21. 1893.

Same. German edition. Pp. 22. 1893.

No. 53. Selected Correspondence relating to the Export Trade of the United States in Live Stock and Meat Products, of Jeremiah M. Rusk, Secretary of Agriculture. Pp. 33. 1893.

No. 54. Suggestions regarding the Cooking of Food, by Edward Atkinson; with Introductory Statements Regarding the Nutritive Value of Common Food Materials, by Ellen H. Richards. Pp. 31. 1894.

No. 55. List of Publications of the United States Department of Agriculture for the Five Years 1889-1893, inclusive. Pp. 42. 1894.

No. 56. Arbor Day: Its History and Observance. By N. H. Egleston. Pp. 80. 1896.

No. 57. Proceedings of the National Convention for the Suppression of Insect Pests and Plant Diseases by Legislation. Held at Washington, D. C., March 5 and 6, 1897. Edited by B. T. Galloway. Pp. 31. 1897.

No. 58. Cultivation of Tobacco in Sumatra. By Emile Mulder. Pp. 31, map 1. 1898.

No. 59. Curing and Fermentation of Cigar Leaf Tobacco. By Oscar Loew, of the Division of Vegetable Physiology and Pathology. Results of Bacteriological, Chemical, and Chemico-physiological Studies of Cigar Leaf Tobacco during the Three Stages: Curing, Sweating or Fermentation, and Cold Sweat or Aging. Pp. 34. 1899.

No. 60. Temperature Changes in Fermenting Piles of Cigar Leaf Tobacco. By Milton Whitney and Thomas H. Means, of the Division of Soils, in Cooperation with the Division of Vegetable Physiology and Pathology. Pp. 28, figs. 7. 1899.

No. 61. Tea Culture. The Experiment in South Carolina. By Dr. Charles U. Shepard, Special Agent in Charge Tea Culture Investigations. Pp. 27, pls. 9, figs. 4. 1899.

No. 62. Cultivation of Cigar Leaf Tobacco in Florida. By Marcus L. Floyd, of the Division of Soils, in cooperation with the Division of Vegetable Physiology and Pathology. Pp. 31, pls. 8, figs. 6. 1899.

No. 63. The Work of the Agricultural Experiment Stations on Tobacco. Abstracted by J. I. Schulte, Office of Experiment Stations; with introduction and comments by Milton Whitney, Chief of Division of Soils. Pp. 48. 1900.

No. 64. Field Operations of the Division of Soils, 1899. By Milton Whitney, Chief of Division of Soils, with accompanying papers by Thomas H. Means, Clarence W. Dorsey, Frank D. Gardner, Frank K. Cameron, Lyman J. Briggs. Pp. 198, maps. 1900.

No. 65. Physiological Studies of Connecticut Leaf Tobacco. By Oscar Loew, of the Division of Vegetable Physiology and Pathology, detailed to the Division of Soils. Pp. 57. 1900.

No. 66. Sheep and Wool: A review of the progress of American sheep husbandry. By J. R. Dodge, Special Agent. Pp. 63, figs. 3. 1900.

No. 67. Foreign Markets for American Agricultural Products. Testimony of Frank H. Hitchcock, Chief of the Section of Foreign Markets, before the Industrial Commission. Pp. 53. 1901.

No. 68. Catalase, a New Enzym of General Occurrence, with Special Reference to the Tobacco Plant. By Oscar Loew, Division of Vegetable Physiology and Pathology, detailed to the Division of Soils. Pp. 47. 1901.

No. 69. Progress of the Beet-Sugar Industry in the United States in 1900. Report of Special Agent Charles F. Saylor. Index. Pp. 178. 1901.

MISCELLANEOUS REPORTS (UNNUMBERED).

Speech of the Hon. J. Horsford, of New York, in favor of the establishment of an agricultural bureau; delivered in the House of Representatives, June 24, 1852. Pp. 7.

20 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

Letter from the Commissioner of Patents (C. Mason) in obedience to the act of Aug. 18, 1856, respecting the purchase of seeds by that Department. Pp. 10. 1856. In S. Doc. No. 61, 34th Congress, 3d session.

Letter from the Secretary of the Interior (C. B. Smith) in answer to a resolution of the House of the 20th of January, in relation to appropriation in aid of agriculture. Pp. 8. 1862.

In H. Ex. Doc. No. 43, 37th Congress, 2d session.

Letter from the Commissioner of Patents (D. P. Holloway) in answer to resolution of the House of 3d of December, relative to the expenditure of the agricultural fund. Pp. 8. 1862.

In H. Ex. Doc. No. 5, 37th Congress, 3d session.

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In H. Ex. Doc. No. 14, 37th Congress, 3d session.

Letter from the Commissioner of Agriculture (Isaac Newton) to the Committee on Agriculture, upon the subject of the taxation of tobacco as recommended by the Commissioner of Internal Revenue. Pp. 6. 1864.

In S. Mis. Doc. No. 13, 38th Congress, 1st session.

Reply of the Commissioner of Agriculture (Isaac Newton) to House resolution of Jan. 25, 1866, relative to receipts and disbursements of the Department. Pp. 43. 1866.

In H. Ex. Doc. No. 49, 39th Congress, 1st session.

Letter of the Commissioner of Agriculture (Isaac Newton), communicating, in compliance with a resolution of the Senate of 13th April, information in relation to the rinderpest or cattle plague. 1866.

In S. Mis. Doc. No. 98, 39th Congress, 1st session.

Letter from the Commissioner of Agriculture (Horace Capron) in answer to a resolution of the House of the 11th of December, relative to the allowance of 20 per cent for last fiscal year. P. 1. 1867.

In H. Ex. Doc. No. 55, 40th Congress, 2d session.

Report of the Commissioner of Agriculture (Horace Capron) in response to House resolution of 9th December, 1867, instructing the Commissioner to report the "condition of the Department of Agriculture, and what legislation is necessary to enable him to so reorganize the Department as to place it upon a footing commensurate with the vast interests committed to its charge." Pp. 11. 1868.

In H. Ex. Doc. No. 91, 40th Congress, 2d session.

Letter from the Commissioner of Agriculture (Horace Capron) relative to the manufacture of beet sugar. Pp. 3. 1868.

In H. Mis. Doc. No. 84, 40th Congress, 2d session.

Reports of the Commissioner of Agriculture on the Diseases of Cattle in the United States. Pp. 190. Illus. 1869.

Letter from the Commissioner of Agriculture (Frederick Watts) relative to inventory and accounts of the property of the United States in the public buildings and grounds. Pp. 2. 1871.

In H. Ex. Doc. No. 17, 42d Congress, 2d session.

Report of the Commissioner of Agriculture on the Diseases of Cattle in the United States. Index. Pp. 205, illus., col. pls. 1871.

Proceedings of the National Agricultural Convention at Washington, February 15-17, 1872. Pp. 84. 1872.

In S. Mis. Doc. No. 164, 42d Congress, 2d session.

Letter from the Commissioner of Agriculture (Frederick Watts) transmitting a list of the articles purchased and disposed of by his Department since the inventory made Dec. 1, 1871. Pp. 2. 1872.

In H. Ex. Doc. No. 34, 42d Congress, 3d session.

Annual Report (Supplemental) of the Commissioner of Agriculture to the President, Nov., 1877; also transmitting Supplemental Departmental Reports 1 and 3. 1877.

Information in Relation to Disease Prevailing Among Swine and Other Domestic Animals, communicated to the Senate by the President of the United States, in compliance with a resolution of the Senate of February 20, 1878. Pp. 149. 1878. In S. Ex. Doc. No. 35, 45th Congress, 2d session.

Letter from the Commissioner of Agriculture, communicating information on the subject of pleuro-pneumonia among cattle. Pp. 22. 1879.

In S. Ex. Doc. No. 71, 45th Congress, 3d session.

Contagious Diseases of Cattle. Message from the President of the United States transmitting documents received from the Commissioner of Agriculture, in reply to resolution of the 7th instant, relative to contagious diseases of cattle. Pp. 75, pls. 6. 1880.

In S. Ex. Doc. No. 5, 46th Congress, 3d session.

Letter from the Commissioner of Agriculture to Hon. B. Le Fevre, chairman of the subcommittee on agriculture of the House, regarding the needs of the Department. Pp. 15. 1880.

Communication of the Commissioner of Agriculture relative to the establishment of an experiment station in the District of Columbia. Pp. 6. 1881.

In H. Mis. Doc. No. 30, 47th Congress, 1st session.

Letter from the Commissioner of Agriculture on Experiments made under the direction of the Department by Dr. D. E. Salmon, for the prevention of fowl cholera. 1881.

Preliminary Report of the Department of Agriculture for 1880. Pp. 155. 1881.

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Letter from the Commissioner of Agriculture (George B. Loring) in response to a resolution of the House of Representatives relative to the growth of cinchona in the United States. Pp. 3. 1882.

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Area and Product of Cereals Grown in 1879 as returned by the Census of 1880. Pp. 97. 1883.

Report on the Participation of the Department of Agriculture in the International Exhibition of 1876, at Philadelphia. By William Saunders. Pp. 223-434. 1884.

Contagious Diseases of Domesticated Animals. Investigations by Department of Agriculture. 1883-1884. Index. Pp. 368, pls. 14, map 1. 1884.

Letter from the Commissioner of Agriculture (George B. Loring), transmitting a statement of certain grains produced in the United States during certain periods, and their disposition. Pp. 12. 1884.

In S. Ex. Doc. No. 137, 48th Congress, 1st session.

Letter from the Commissioner of Agriculture (George B. Loring), transmitting a list of persons employed, and statement of expenditures and of means adopted for the suppression of contagious and infectious diseases among animals. Pp. 8. 1884.

In H. Ex. Doc. No. 46, 48th Congress, 2d session.

22 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

Destruction of the Evergreen and other Forest Trees in Northern New England and New York. Second report. Reprint from the Report of the Entomologist for 1884. By A. S. Packard. Pp. 12. 1885.

Letter from the Commissioner of Agriculture (Norman J. Colman), transmitting, in response to a resolution of the House, a statement showing the amount expended for the Chemical Division on laboratory work from the appropriation for the fiscal year and the balance unexpended. Pp. 4. 1886.

In H. Mis. Doc. No. 240, 49th Congress, 1st session.

Letter from the Commissioner of Agriculture (Norman J. Colman), transmitting a statement of expenditures for the Department of Agriculture for the fiscal year ended June 30, 1885. Pp. 43. 1886.

In H. Mis. Doc. No. 154, 49th Congress, 1st session.

Letter from the Commissioner of Agriculture (Norman J. Colman), transmitting certain papers, in response to a resolution of the House calling for a copy of Department circular of June 6, 1882; a copy of the award of the committee appointed to carry the provisions of the circular into effect; copies of all correspondence with the Delaware Beet Sugar Company on the subject, and a statement of the awards paid and to whom. Pp. 6. 1886.

In H. Mis. Doc. No. 284, 49th Congress, 1st session.

Letter from the Acting Commissioner of Agriculture (F. C. Nesbit) transmitting, in response to a resolution of the House, a report by the Statistician of that Department respecting the supply and domestic requirements of wheat and corn and the acreage of wheat for the present year, as compared with the past five years; also the probable requirements of importing countries and the acreage of crop and probable surplus or shortage in exporting countries for the ensuing year. Pp. 11. 1886.

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Letter from the Commissioner of Agriculture (Norman J. Colman) in response to Senate resolution of June 29, 1886, relative to the delivery of the annual report. Pp. 15. 1887.

In S. Mis. Doc. No. 135, 49th Congress, 1st session.

Letter from the Commissioner of Agriculture (Norman J. Colman) in response to a Senate resolution of December 7, 1887, relative to employees obtaining patents for the process of sugar making. Pp. 5. 1887.

In S. Ex. Doc. No. 24, 50th Congress, 1st session.

Letter from the Commissioner of Agriculture (Norman J. Colman) transmitting a statement of expenditures in that Department for the fiscal year ended June 30, 1887. Pp. 81. 1888.

In H. Mis. Doc. No. 122, 50th Congress, 1st session.

Letter from the Commissioner of Agriculture transmitting, in response to Senate resolution of January 30, 1888, the report of Professor Swenson on sorghum sugar. Pp. 11. 1888.

In S. Ex. Doc. No. 68, 50th Congress, 1st session.

Report in response to inquiries of the Select Committee of the United States Senate appointed to inquire into and examine the methods of business of the Executive Departments. By N. J. Colman. Pp. 106. 1888.

Allowances for Traveling Expenses. Department of Agriculture circular. Pp. 8. 1889.

Circular to the Managers and Agents of Railroad and Transportation Companies of the United States. "An act to prevent the exportation of diseased cattle, etc.," by the Secretary of Agriculture (J. M. Rusk). 1890.

Export of Dairy Products of the United States from 1821 to 1890. 1890.

Letter from the Secretary of Agriculture transmitting a statement of the expenditures in the Department of Agriculture for the fiscal year ended June 30, 1889. Pp. 98. 1890.

In H. Ex. Doc. No. 104, 51st Congress, 1st session.

Order and Regulations for the Inspection of Cattle and Sheep for Export, by the Secretary of Agriculture. Pp. 7. 1890.

Regulations for the Inspection and Quarantine of Cattle, Sheep, and other Ruminants, and Swine, Imported into the United States. Pp. 8. 1890.

Regulations for the Inspection of Salted Pork and Bacon for Export. Pp. 7. 1890.

Letter from the Secretary of Agriculture transmitting reports upon the operations of the Women's Silk Culture Association of the United States and of the Ladies' Silk Culture Society of California, and upon experiments made in the District of Columbia with silk-reeling machinery. Pp. 30. 1890.

In H. Ex. Doc. No. 110, 51st Congress, 1st session.

Letter from the Secretary of Agriculture transmitting the Report of the Bureau of Animal Industry. Pp. 104. 1890.

In S. Ex. Doc. No. 8, 51st Congress, 2d session.

Communication from the Acting Secretary of Agriculture (Edwin Willits) in reference to a deficiency in the appropriation for the North Dakota Agricultural Experiment Station, and stating that said appropriation should be made. P. 1. 1890.

In H. Ex. Doc. No. 423, 51st Congress, 1st session.

Selected Correspondence relating to the Export Trade of the United States in Live Stock and Meat Products. Pp. 33. 1890-92.

Regulations for the Inspection of Live Stock and their Products. By the Secretary of Agriculture (J. M. Rusk). Pp. 8. 1891.

Letter from the Secretary of Agriculture transmitting a statement of the expenditures of the Department for the fiscal year ended June 30, 1890. Pp. 95. 1891.

In H. Ex. Doc. No. 35, 51st Congress, 2d session.

The Scientific Work of the Department in its Relations to Practical Agriculture. (Special report of the Assistant Secretary (E. Willits), reprinted from the report of the Secretary in 1890.) Pp. 18. 1891.

Letter from the Secretary of Agriculture, transmitting a statement of all purchases of cocoons, and all sales of silk and silk waste, during the fiscal year ending June 30, 1890. Also the reports of the Ladies' Silk Culture Society of California and the Women's Silk Culture Association of the United States. Pp. 25. 1891.

In H. Ex. Doc. No. 203, 51st Congress, 2d session.

Letter from the Secretary of Agriculture transmitting the Report of the Bureau of Animal Industry for the year 1891. Pp. 129. 1891.

In S. Ex. Doc. No. 11, 52d Congress, 1st session.

Cooperation of the Department of Agriculture with the educational forces in the United States relating to agriculture. (Special report of the Assistant Secretary (E. Willits), reprinted from the report of the Secretary of Agriculture for 1891). Pp. 16. 1892.

Letter from the Secretary of Agriculture in response to Senate resolution of March 24, 1892, relative to employees in his Department. Pp. 5. 1892.

In S. Ex. Doc. No. 75, 52d Congress, 1st session.

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Letter from the Secretary of Agriculture in response to Senate resolution of February 23, 1892, transmitting the report of the agent of the Department of Agriculture for making experiments in the production of rainfall. Pp. 59, pls. 9. 1892.

In S. Ex. Doc. No. 45, 52d Congress, 1st session.

Letter from the Secretary of Agriculture (J. M. Rusk) transmitting a detailed statement of all expenditures of appropriations for the Department of Agriculture for the year ended June 30, 1891. Pp. 134. 1892.

In H. Ex. Doc. No. 55, 52d Congress, 1st session.

Circular letter of the Secretary of Agriculture (J. S. Morton) in relation to cattle imported from Great Britain or the Continent of Europe and the Dominion of Canada. 1893.

Duties of the Assistant Secretary. Review of the work, 1889-1892. (Special Report of the Assistant Secretary (E. Willits), reprinted from the Report of the Secretary of Agriculture for 1892). Pp. 17. 1893.

Notice of "Simple Directions for the Sterilization of Milk." Figs. 2. 1893.

Notice Relating to the International Exhibition to be held at Vienna, next year, from April 20 to June 20. 1893.

Notice of Receipt of Communications on Various Subjects. By the Secretary of Agriculture (J. S. Morton). 1893.

Notice of Receipt of Letter from Minister Terrell, Constantinople, relating to Agriculture in Angora. 1893.

Notice of Department of Agriculture. Its Various Functions. 1893.

Statements Showing the Expenditures of Appropriations for Experiments in the Manufacture of Sugar. Pp. 3. 1893.

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Circular. Allowances for Traveling Expenses. 1893. Pp. 11. 1893.

Letter from the Secretary of Agriculture transmitting the Annual Report of the Bureau of Animal Industry for 1892. Pp. 229. 1893.

In S. Ex. Doc. No. 20, 52d Congress, 2d session.

Notice of Circular on Hungarian Brome Grass. Forwarded by the Direction of the Assistant Secretary. 1894.

Issued also as Circular 1, Division of Botany.

Letter from the Secretary of Agriculture relative to the destruction of the noxious plant or weed known as "saltwort," or Russian thistle. Pp. 5. 1894.

In S. Mis. Doc. No. 41, 53d Congress, 2d session.

Letter from the Secretary of Agriculture, in response to Senate resolution, July 31, transmitting information in relation to investigations and experiments in the planting of native pine seed for the growth of native pine in the sand hills of the Northwest. Pp. 14. 1894.

In S. Ex. Doc. No. 172, 53d Congress, 2d session.

Letter from the Secretary of Agriculture transmitting, in response to House resolution of January 22, a list of the special agents of the Department, together with a statement of their work and salaries received, for the four years and six months ending December 31, 1893. Pp. 45. 1894.

In H. Ex. Doc. No. 248, 53d Congress, 2d session.

Letter from the Secretary of Agriculture transmitting a detailed statement of the expenditures of the Department of Agriculture for the fiscal year ending June 30, 1894. Pp. 180. 1894.

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No. 10. The Russian Thistle and Other Troublesome Weeds in the Wheat Region of Minnesota and North and South Dakota. By L. H. Dewey, Assistant, Division of Botany. Pp. 16, pls. 2. 1893.

No. 11. The Rape Plant: Its History, Culture, and Uses. By Thomas Shaw, Professor of Agriculture in the Ontario Agricultural College. Pp. 20, figs. 4. 1893.

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No. 19. Important Insecticides: Direction for Their Preparation and Use. By C. L. Marlatt, Division of Entomology. Pp. 23. 1894.

No. 20. Washed Soils: How to Prevent and Reclaim Them. Prepared under direction of Chas. W. Dabney, jr., Assistant Secretary, by the Divisions of Chemistry, Soils, Forestry, and Botany. Pp. 22, figs. 6. 1894.

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No. 31. Alfalfa or Lucern. By Jared G. Smith, Assistant Agrostologist. Pp. 23, figs. 3. 1895. Revised edition. 1898.

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No. 45. Some Insects Injurious to Stored Grain. By F. H. Chittenden, Assistant Entomologist. Pp. 24, figs. 18. 1896.

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No. 50. Sorghum as a Forage Crop. By Thomas A. Williams, Assistant Agrostologist. Prepared under the direction of the Agrostologist. Pp. 20. 1897.

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No. 5. The Civil Service in the Department of Agriculture. Pp. 4. 1896.

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SEPARATES FROM YEARBOOKS.

REPRINTED FROM YEARBOOK FOR 1894.

- No. 1. The Federal Meat Inspection. By D. E. Salmon, D. V. M., Chief of the Bureau of Animal Industry. Pp. i-iii, 67-80. August, 1895.
- No. 2. Education and Research in Agriculture in the United States. By A. C. True, Ph.D., Director of the Office of Experiment Stations. Pp. i-iii, 81-116. August, 1895.
- No. 3. What Meteorology is Doing for the Farmer. By Mark W. Harrington, Chief of the Weather Bureau. Pp. i-iii, 117-120. August, 1895.
- No. 4. The Value of Forecasts. By H. H. C. Dunwoody, Assigned as Assistant Chief, Weather Bureau. Pp. 121-128. (See Weather Bureau) August, 1895.
- No. 5. Soils in Their Relations to Crop Production. By Milton Whitney, Chief of Division of Agricultural Soils. Pp. 129-164, figs. 1-11. August, 1895.
- No. 6. Water as a Factor in the Growth of Plants. By B. T. Galloway and Albert F. Woods, Chief and Assistant Chief of the Division of Vegetable Physiology and Pathology. Pp. i-iii, 165-176, figs. 12-15. September, 1895.
- No. 7. Mineral Phosphates as Fertilizers. By H. W. Wiley, Chemist. Pp. i-iii, 177-192, figs. 16-17. August, 1895.
- No. 8. Fertilization of the Soil as Affecting the Orange in Health and Disease. By H. J. Webber, Assistant, Division of Vegetable Physiology and Pathology. Pp. i-iii, 193-202, figs. 18-19. October, 1895.
- No. 9. The Geographic Distribution of Animals and Plants in North America. By C. Hart Merriam, Chief of Division of Ornithology and Mammalogy. Pp. i-iii, 203-214, figs. 20. August, 1895.
- No. 10. Hawks and Owls from the Standpoint of the Farmer. By A. K. Fisher, M. D., Assistant Ornithologist. Pp. i-iii, 215-232, figs. 21-24, pls. 3. September, 1895.
- No. 11. The Crow Blackbirds and their Food. By F. E. L. Beal, Assistant Ornithologist, U. S. Department of Agriculture. Pp. i-iii, 233-248, fig. 25. September, 1895.
- No. 12. Some Scale Insects of the Orchard. By L. O. Howard, M. S., Entomologist. Pp. i-iii, 249-276, figs. 26-42. August, 1895.
- No. 13. The More Important Insects Injurious to Stored Grain. By F. H. Chittenden, Assistant Entomologist. Pp. i-iii, 277-294, figs. 43-51. August, 1895.
- No. 14. The Dairy Herd: Its Formation and Management. By Henry E. Alvord, M. S., C. E. Pp. i-iii, 295-316, Pl. I. August, 1895.
- No. 15. Some Practical Suggestions for the Suppression and Prevention of Bovine Tuberculosis. By Theobald Smith, M. D., Chief of the Division of Animal Pathology, Bureau of Animal Industry. Pp. i-iii, 317-330. October, 1895.
- No. 16. The Pasteurization and Sterilization of Milk. By E. A. de Schweinitz, Ph. D., Biochemic Laboratory, Bureau of Animal Industry. Pp. i-iii, 331-356, figs. 52-79. August, 1895.

No. 17. Food and Diet. By W. O. Atwater, Ph. D., Professor of Chemistry in Wesleyan University, Director of Storrs (Conn.) Experiment Station, and Special Agent of the U. S. Department of Agriculture in Charge of Investigations of Food and Nutrition. Pp. i-iii, 357-558, figs. 80-82. September, 1895.

No. 18. Pure Seed Investigation. By Gilbert H. Hicks, Assistant, Division of Botany. Pp. i-iii, 389-408, figs. 83-91. September, 1895.

No. 19. The Grain Smuts: Their Cause and Prevention. By Walter T. Swingle, Assistant, Division of Vegetable Physiology and Pathology. Pp. i-iii, 409-420, figs. 92-99. August, 1895.

No. 20. Grasses as Sand and Soil Binders. By F. Lamson-Scribner, B. Sc., Agrostologist. Pp. i-iii, 421-436, figs. 100-110. August, 1895.

No. 21. Sketch of the Relationship between American and Eastern Asian Fruits. By L. H. Bailey, Jr., Professor of Horticulture, Cornell University, Ithaca, N. Y. Pp. i-iii, 437-442. September, 1895.

No. 22. Facts Concerning Ramie. By Chas. Richards Dodge, Special Agent in Charge of Fiber Investigations. Pp. i-iii, 443-460. Pls. IV, V, figs. 111-115. October, 1895.

No. 23. Forestry for Farmers. By B. E. Farnow, Chief of the Division of Forestry. Pp. i-v, 461-500, figs. 116-130. October, 1895.

No. 24. Best Roads for Farms and Farming Districts. By Roy Stone, Special Agent and Engineer. Pp. i-iii, 501-504, figs. 131-137. August, 1895.

No. 25. State Highways in Massachusetts. By George A. Perkins, Chairman Massachusetts State Highway Commission. Pp. i-iii, 505-512. September, 1895.

No. 26. Improvement of Public Roads in North Carolina. By Prof. J. A. Holmes, State Geologist and Secretary of the North Carolina Road Improvement Association. Pp. i-iii, 513-520, Pls. VI, VII. September, 1895.

No. 27. Tobacco Soils of Connecticut and Pennsylvania. By Milton Whitney, Chief of the Division of Agricultural Soils. Pp. i-iii, 143-155, figs. 4-10. September, 1895.)

No. 28. Truck Lands of the Atlantic Seaboard. By Milton Whitney, Chief of the Division of Agricultural Soils. Pp. i-iii, 129-143, figs. 1-3. September, 1895.

No. 29. Conditions in Soils of the Arid Region. By Milton Whitney, Chief of the Division of Agricultural Soils. Pp. 155-164, fig. 11. September, 1895.

No. 30. Weather Conditions of the Crop of 1894. By H. H. C. Dunwoody, Assistant Chief of Weather Bureau. Pp. 529-533, figs. 138, 139. September, 1895.

No. 31. Best Roads for Farms and Farming Districts. By Roy Stone, Special Agent and Engineer. State Highways in Massachusetts. By George A. Perkins, Chairman Massachusetts State Highway Commission. Improvement of Public Roads in North Carolina. By Prof. J. A. Holmes, State Geologist and Secretary of the North Carolina Road Improvement Association. Pp. i-iii, 501-520, figs. 131-137, Pls. VI, VII. January, 1896.

A combination of Separates Nos. 24, 25, and 26.

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No. 32. Reasons for Cultivating the Soil. By Milton Whitney, Chief of the Division of Agricultural Soils. Pp. 123-130. June, 1896.

No. 33. Oil-producing Seeds. By Gilbert H. Hicks, Assistant, Division of Botany. Pp. 185-204, figs. 26-36. June, 1896.

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No. 34. Testing Seeds at Home. By A. J. Pieters, Assistant, Division of Botany. Pp. 175-184, figs. 23-25. June, 1896.

No. 35. Soil Ferments Important in Agriculture. By H. W. Wiley, Chief of the Division of Chemistry.—Origin, Value, and Reclamation of Alkali Lands. By E. W. Hilgard, Professor of Agriculture and Agricultural Chemistry, University of California.—Reasons for Cultivating the Soil. By Milton Whitney, Chief of the Division of Agricultural Soils.—Humus in its Relation to Soil Fertility. By Harry Snyder, Professor of Agricultural Chemistry in the University of Minnesota. Pp. i-iii, 69-142, Pl. II, figs. 1-7. June, 1896.

No. 35. Part 1. Soil Ferments Important in Agriculture. By Harvey W. Wiley, Chief of the Division of Chemistry. Pp. 69-102, figs. 2. June, 1896.

No. 35. Part 2. Origin, Value, and Reclamation of Alkali Lands. By E. W. Hilgard, Professor of Agriculture and Agricultural Chemistry, University of California. Pp. 103-122, Pl. II, figs. 3-7. June, 1896.

No. 35. Part 3. Reasons for Cultivating the Soil. By Milton Whitney, Chief of the Division of Agricultural Soils. Pp. 123-130. June, 1896.

No. 35. Part 4. Humus in its Relation to Soil Fertility. By Harry Snyder, Professor of Agricultural Chemistry in the College of Agriculture of the University of Minnesota. Pp. 131-142. June, 1896.

No. 36. Irrigation for the Garden and Greenhouse. By L. R. Taft, Professor of Horticulture, Michigan Agricultural College. The Health of Plants in Greenhouses. By B. T. Galloway, Chief of the Division of Vegetable Physiology and Pathology. Pp. i-iii, 233-256, figs. 49-56. June, 1896.

No. 36. Part 1. Irrigation for the Garden and Greenhouse. By L. R. Taft, Professor of Horticulture, Michigan Agricultural College. Pp. 233-246, figs. 49-52. June, 1896.

No. 36. Part 2. The Health of Plants in Greenhouses. By B. T. Galloway, Chief of Division of Vegetable Physiology and Pathology. Pp. 247-256, figs. 53-56. June, 1896.

No. 37. Four Common Birds of the Farm and Garden. By Sylvester D. Judd, Assistant Ornithologist. The Meadow Lark and Baltimore Oriole. By F. E. L. Beal, Assistant Ornithologist. Pp. 3, 405-430, figs. 106-111. June, 1896.

No. 37. Part 1. Four Common Birds of the Farm and Garden. By Sylvester D. Judd, Assistant Ornithologist. Pp. 405-418, figs. 106-109. June, 1896.

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No. 38. Hemp Culture. By Chas. Richards Dodge, Special Agent in Charge of Fiber Investigations. Pp. 215-222. June, 1896.

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No. 41. Some Additions to our Vegetable Dietary. By Frederick V. Coville, Botanist. Pp. 205-214, figs. 37-45. June, 1896.

No. 42. Work of the Department of Agriculture as Illustrated at the Atlanta Exposition. By Robert E. Wait, Private Secretary to Assistant Secretary of Agriculture. Pp. 503-525. Pls. VIII-X, fig. 129. June, 1896.

No. 43. The Principal Insect Enemies of the Grape. By C. L. Marlatt, First Assistant Entomologist. Pp. 385-404, figs. 94-105. June, 1896.

No. 44. Inefficiency of Milk Separators in Removing Bacteria. By Veranus A. Moore, Chief of the Division of Animal Pathology, Bureau of Animal Industry.—Butter Substitutes. By E. A. de Schweinitz, Biochemic Laboratory, Bureau of Animal Industry.—The Manufacture and Consumption of Cheese. By Henry E. Alvord, Chief of Dairy Division, Bureau of Animal Industry. Pp. i-iv, 431-474, figs. 112-122. June, 1896.

No. 44. Part 1. Inefficiency of Milk Separators in Removing Bacteria. By Veranus A. Moore, Chief of the Division of Animal Pathology, Bureau of Animal Industry. Pp. 431-444, figs. 112-119. June, 1896.

No. 44. Part 2. Butter Substitutes. By E. A. de Schweinitz, Biochemic Laboratory, Bureau of Animal Industry. Pp. 445-452. June, 1896.

No. 44. Part 3. The Manufacture and Composition of Cheese. By Henry E. Alvord, Chief of the Dairy Division, Bureau of Animal Industry. Pp. 453-474, figs. 120-122. June, 1896.

No. 45. Inefficiency of Milk Separators in Removing Bacteria. By Veranus A. Moore, Chief of Division of Animal Pathology, Bureau of Animal Industry, Pp. 431-444, figs. 112-119. June, 1896.
(Same as 44, pt. 1.)

No. 46. Climate, Soil Characteristics, and Irrigation Methods of California. By Charles W. Irish, Chief of the Office of Irrigation Inquiry. Pp. 475-486, Pls. VI, VII, figs. 123-127. June, 1896.

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No. 53. Grasses of Salt Marshes. By F. Lamson-Scribner, B. Sc., Agrostologist. Pp. 325-332, figs. 75-79. July, 1896.

No. 54. Grass Gardens. By F. Lamson-Scribner, B. Sc., Agrostologist. Pp. 301-308, figs. 68-69. July, 1896.

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No. 55. Part 1. Frost and Freezes as Affecting Cultivated Plants. By B. T. Gal-loway, Chief of the Division of Vegetable Physiology and Pathology. Pp. 143-158, figs. 8-15. June, 1896.
(Same as No. 48.)

No. 55. Part 2. The Two Freezes of 1894-95 in Florida and What they Teach. By Herbert J. Webber, Assistant, Division of Vegetable Physiology and Pathology. Pp. 159-174, pl. III, figs. 16-22. June, 1896.

No. 55. Part 3. The Pineapple Industry in the United States. By Herbert J. Web-ber, Assistant, Division of Vegetable Physiology and Pathology. Pp. 269-282, Pl. IV, figs. 62-67. July, 1896.

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No. 57. Part 1. Principles of Pruning and Care of Wounds in Woody Plants. By Albert F. Woods, Assistant Chief, Division of Vegetable Physiology and Path-ology. Pp. 257-268, figs. 57-61. July, 1896.

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No. 58. The Relation of Forests to Farms. B. E. Farnow, Chief of the Division of Forestry.—Tree Planting in the Western Plains. By Charles A. Keffer, Assis-tant Chief of the Division of Forestry. Pp. i-iii, 333-360, figs. 80-82. July, 1896.

No. 59. Canadian Field Peas. By Thomas Shaw, Professor of Animal Husbandry in College of Agriculture of the University of Minnesota.—Grass Gardens. By F. Lamson-Scribner, B. Sc., Agrostologist.—Forage Conditions of the Prairie Regions. By Jared G. Smith, Assistant Agrostologist.—Grasses of Salt Marshes. By F. Lamson-Scribner, B. Sc., Agrostologist. Pp. i-iv, 223-232, 301-332, figs. 46-48, 69-79. July, 1896.

No. 59. Part 1. Canadian Field Peas. By Thomas Shaw, Professor of Animal Hus-bandry, College of Agriculture of the University of Minnesota. Pp. 223-232, figs. 46-48. June, 1896.

No. 59. Part 2. Grass Gardens. By F. Lamson-Scribner, B. Sc., Agrostologist. Pp. 301-308, figs. 68-69. July, 1896.
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No. 59. Part 3. Forage Conditions of the Prairie Regions. By Jared G. Smith, Assistant Agrostologist. Pp. 309-324, figs. 70-74. July, 1896.

No. 59. Part 4. Grasses of Salt Marshes. By F. Lamson-Scribner, B. Sc., Agrostolo-gist. Pp. 325-332, figs. 75-79. July, 1896.
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No. 60. Timothy in the Prairie Region. By Thomas A. Williams, Assistant, Division of Agrostology. Pp. i-ii, 147-154, figs. 29-30. July, 1897.

No. 61. Cowpeas (*Vigna catjang*). By Jared G. Smith, Assistant Agrostologist. Pp. i-ii, 287-296. July, 1897.

No. 62. The Country Slaughterhouse as a Factor in the Spread of Diseases. By Ch. Wardell Stiles, Ph. D., Zoologist, Bureau of Animal Industry. Pp. i-ii, 155-166. July, 1897.

No. 63. Some Modern Disinfectants. By E. A. de Schweinitz, Ph. D., M. D., Chief of Biochemic Division, Bureau of Animal Industry. Pp. i-ii, 255-262, fig. 58. July, 1897.

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No. 67. Some Common Poisonous Plants. By W. K. Chesnut, Assistant, Division of Botany. Pp. i-ii, 137-146, figs. 24-28. July, 1887.

No. 68. Seed Production and Seed Saving. By A. J. Pieters, Assistant Botanist. Pp. i-ii, 207-216, figs. 43-50. July, 1897.

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No. 74. Insect Control in California. By C. L. Marlatt, First Assistant Entomologist. Pp. i-ii, 217-236, Pl. V, figs. 51-52. July, 1897.

No. 75. The Asparagus Beetles. By F. H. Chittenden, Assistant, Division of Entomology. Pp. i-ii, 341-353, figs. 84-89. June, 1897.

No. 76. The Feeding Value of Corn Stover. By J. B. Lindsey, Ph. D., Massachusetts (Hatch) Experiment Station, Amherst, Mass. Pp. i-ii, 353-360. July, 1897.

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No. 82. Diseases of Shade and Ornamental Trees. By B. T. Galloway and Albert F. Woods, Chief and Assistant Chief, Division of Vegetable Physiology and Pathology. Pp. i-ii, 237-254, figs. 53-57. July, 1897.

No. 83. Influences of Environment in the Origination of Plant Varieties. By H. J. Webber, Assistant, Division of Vegetable Physiology and Pathology. Pp. i-ii, 89-106, figs. 16-23. July, 1897.

No. 84. Olive Culture in the United States. By Newton B. Pierce, Assistant, Division of Vegetable Physiology and Pathology. Pp. i-ii, 371-390, Pl. VI, figs. 90-93. July, 1897.

No. 85. Methods of Propagating the Orange and Other Citrus Fruits. By Herbert J. Webber, Assistant, Division of Vegetable Physiology and Pathology. Pp. i-ii, 471-488, figs. 126-138. July, 1897.

No. 86. Improvement in Wheat Culture. By Mark Alfred Carleton, Assistant, Division of Vegetable Physiology and Pathology. Pp. i-ii, 489-498, fig. 139. July, 1897.

No. 87. Pruning and Training of Grapes. By E. G. Lodeman, late Assistant Horticulturist, Cornell (N. Y.) Experiment Station. Pp. i-ii, 499-542, figs. 140-163. July, 1897.

No. 88. An Ideal Department of Agriculture and Industries. By E. Tisserand, Councillor of State and Director of Agriculture of France. Pp. i-ii, 543-554. July, 1897.

No. 89. Grass and Forage Experiment Station at Garden City, Kans., and Cooperative Branch Stations in the South. 1892. (See Miscellaneous Report, Division of Botany.)
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No. 91. Lawns and Lawn Making. By F. Lamson-Scribner, Agrostologist. Pp. i-iii, 355-372, Pls. VIII-XIV. June, 1898.

No. 92. Leguminous Forage Crops. By Jared G. Smith, Assistant Agrostologist. Pp. i-iii, 487-508, Pl. XXXI, figs. 17-24. June, 1898.

No. 93. Bureau of Animal Industry. By D. E. Salmon, Chief. Pp. i-iii, 236-258. May, 1898.

No. 94. Utilization of By-Products of the Dairy. By Henry E. Alvord, C. E. Chief of Dairy Division, Bureau of Animal Industry. Pp. i-iii, 509-528. June, 1898.

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No. 96. Birds That Injure Grain. By F. E. L. Beal, Assistant, Biological Survey. Pp. i-iii, 345-354. May, 1898.

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No. 98. Additional Notes on Seed Testing. By Gilbert H. Hicks and Sothoron Key. First Assistant and Assistant, Division of Botany. Pp. i-ii, 441-452, figs. 14-16. June, 1898.

No. 99. Division of Chemistry. By H. W. Wiley, Chemist. Pp. i-iii, 81-89. May, 1898.

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No. 102. Office of Experiment Stations. By A. C. True, Director. Pp. i-iii, 135-143. May, 1898.

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No. 104. Popular Education for the Farmer in the United States. By A. C. True, Ph. D., Director of the Office of Experiment Stations. Pp. i-iii, 279-290, Pl. II. May, 1898.

No. 105. The Needs and Requirements of a Control of Feeding Stuffs. By E. W. Allen, Ph. D., Assistant Director of the Office of Experiment Stations. Pp. i-iii, 421-428. June, 1898.

No. 106. The Agricultural Outlook of the Coast of Alaska. By Walter H. Evans, Ph. D., Botanist of the Office of Experiment Stations. Pp. i-iii, 553-576, Pls. XXXII-XXXIV. June, 1898.

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No. 108. Office of Fiber Investigations. By Chas. Richards Dodge, Special Agent. Pp. i-iii, 224-235. May, 1898.

No. 109. The Present Status of Flax Culture in the United States. By Chas. Richards Dodge, Special Agent, Office of Fiber Investigations. Pp. i-iii, 471-486. June, 1898.

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No. 114. The Library. By W. P. Cutter, Librarian. Pp. i-iii, 220-224. May, 1898.

No. 115. Division of Pomology. By G. B. Brackett, Pomologist. Pp. i-iii, 111-115. May, 1898.

No. 116. The Fruit Industry and Substitution of Domestic for Foreign-Grown Fruits. By William A. Taylor, Assistant Pomologist, Division of Pomology. Pp. 305-344, Pls. III-VII. May, 1898.

No. 117. Divisions of Publications. By Geo. Wm. Hill, Department Editor. Pp. i-iii, 204-220. May, 1898.

No. 118. Office of Road Inquiry. By Roy Stone, Director. Pp. i-iii, 175-180, and Object-Lesson Roads. By Roy Stone, Director Office of Road Inquiry. Pp. i-iii, 373-382, Pls. XV, XVI, fig. 1. May, 1898.

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No. 120. Some Interesting Soil Problems. By Milton Whitney, Chief, Division of Soils. Pp. i-iii, 429-440. June, 1898.

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No. 122. Agriculture Production and Prices. By George K. Holmes, Assistant Statistician. Pp. i-iii, 577-606. June, 1898.

No. 123. Division of Vegetable Physiology and Pathology. By B. T. Galloway, Chief. Pp. i-iii, 99-111. May, 1898.

No. 124. Hybrids and Their Utilization in Plant Breeding. By Walter T. Swingle and Herbert J. Webber, Special Agents, Division of Vegetable Physiology and Pathology. Pp. i-iii, 383-420, Pls. XVII-XX, figs. 2-13. May, 1898.

No. 125. Some Edible and Poisonous Fungi. By Dr. W. G. Farlow, Professor of Cryptogamic Botany, Harvard University. Pp. 453-470, Pls. XXI-XXX. June, 1898.

No. 126. Review of Weather and Crop Conditions, Season of 1897. By James Berry, Chief of Climate and Crop Division. Pp. i-iii, 689-709, figs. 44-45. June, 1898.

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No. 149. Steel-Track Wagon Roads. By Martin Dodge, Director of the Office of Road Inquiry. Pp. i-ii, 291-296, Pls. XVIII-XX, fig. 89. May, 1899.

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No. 154. The Public Domain of the United States. By Max West, Ph. D., of the Division of Statistics. Pp. i-ii, 325-354. May, 1899.

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No. 166. Administrative Work of the Federal Government in Relation to the Animal Industry. By George F. Thompson, Editorial Clerk, Bureau of Animal Industry. Pp. i-iii, 441-464. July, 1900.

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No. 168. Development of the Nutrition Investigations of the Department of Agriculture. By A. C. True, Ph. D., Director, and R. D. Milner, Ph. B., Assistant in Nutrition Investigations, Office of Experiment Stations. Pp. i-iii, 403-414. July, 1900.

No. 169. Soil Investigations in the United States. By Milton Whitney, Chief of Division of Soils. Pp. i-iii, 335-346. July, 1900.

No. 170. Agricultural Education in the United States. By A. C. True, Ph. D., Director of the Office of Experiment Stations. Pp. i-iii, 157-190. July, 1900.

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No. 174. Work of the Breeder in Improving Live Stock. By John Clay, jr., Chicago, Ill. Pp. i-ii, 627-642. July, 1900.

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No. 176. Progress of Economic and Scientific Agrostology. By F. Lamson-Scribner, B. Sc., Agrostologist. Pp. i-iii, 347-366, figs. 5-9. August, 1900.

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No. 178. Development of Agricultural Libraries. By Charles H. Greathouse, M. A., Editorial Clerk, Division of Publications. Pp. i-v, 491-512, Pls. XXXIX-XLII, fig. 24. August, 1900.

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No. 199. Dairy Products at the Paris Exposition of 1900. By Henry E. Alvord, Chief of the Dairy Division, Bureau of Animal Industry. Pp. i-ii, 599-627, Pls. LXXX-LXXXIV. July, 1901.

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No. 206. Some Poisonous Plants of the Northern Stock Ranges. By V. K. Chesnut, In Charge of Poisonous Plant Investigations, Division of Botany. Pp. i-iii, 305-324, Pls. XXXII-XXXIV, figs. 39-42. July, 1901.

No. 207. The Scale Insect and Mite Enemies of Citrus Trees. By C. L. Marlatt, First Assistant, Division of Entomology. Pp. i-iv, 247-290, Pls. XXVI-XXXI, figs. 9-33. July, 1901.

No. 208. Fungous Diseases of Forest Trees. By Hermann von Schrenk, Instructor in the Shaw School of Botany, and Special Agent in the Division of Vegetable Physiology and Pathology, Department of Agriculture. Pp. i-iii, 199-210, Pls. XXI-XXV. August, 1901.

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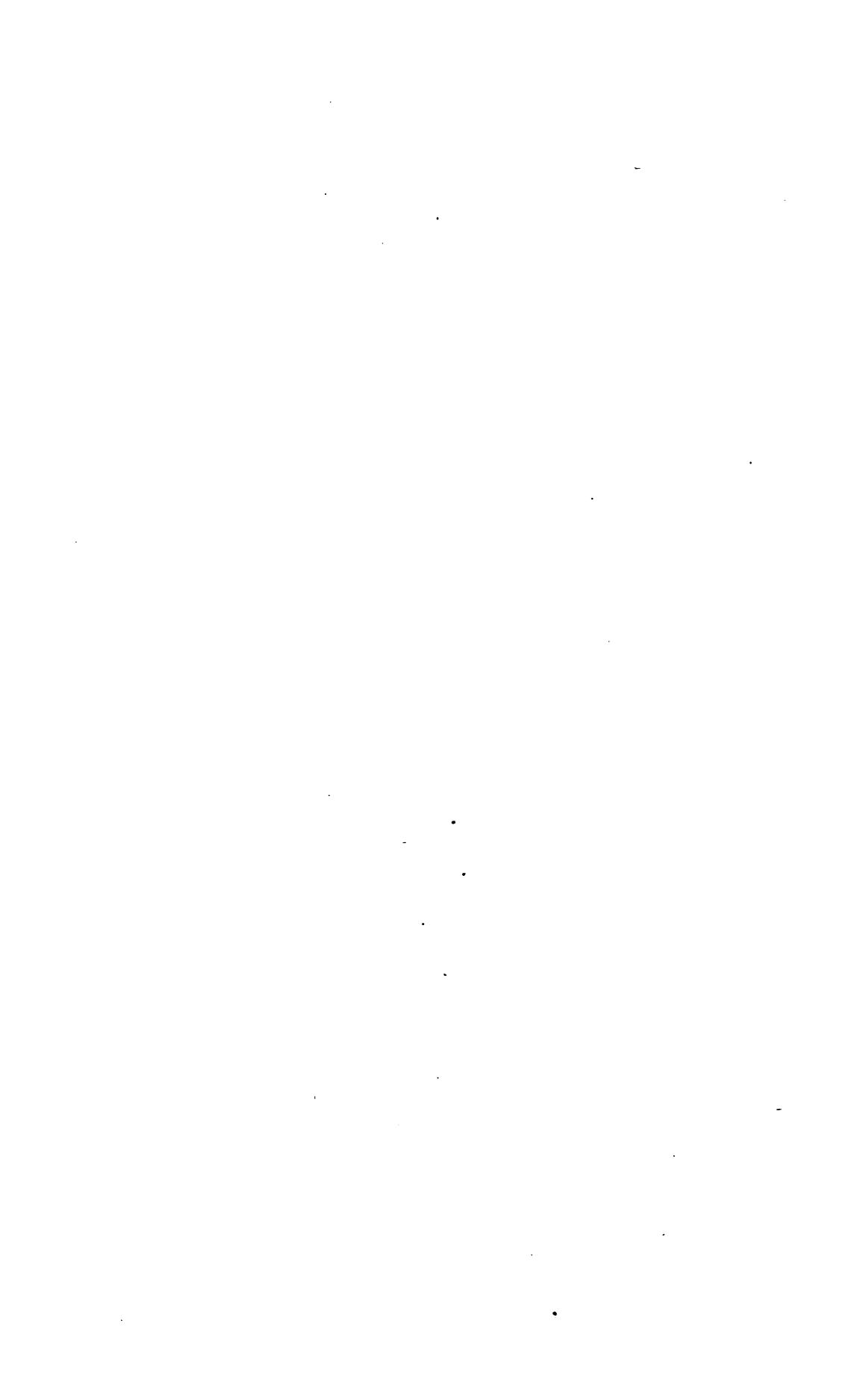
No. 223. Our Native Pasture Plants. By F. Lamson-Scribner, Agrostologist. Pp. i-ii, 581-598, Pls. LXXVI-LXXIX, figs. 75-85. August, 1901.

No. 224. William Saunders. By the Editor. Pp. 625-630, frontispiece. July, 1901.

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Report of the Appointment Clerk for 1896. By J. B. Bennett. Pp. i-ii, 267-269, from Report of the Secretary of Agriculture, being part of the Message and Documents communicated to the Two Houses of Congress at the beginning of the second session of the Fifty-fourth Congress. 1897.

Report of the Appointment Clerk for 1897. By J. B. Bennett. Pp. 225-226. In Annual Reports of the Department of Agriculture for the fiscal year ended June 30, 1897.



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Regulations Governing Financial Transactions with the U. S. Department of Agriculture, together with Extracts from the Revised Statutes, Decisions of the Comptrollers, etc. Pp. 42. 1894.

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Fiscal Regulations of the U. S. Department of Agriculture (revised edition); together with Extracts from the Revised Statutes, Decisions of Courts, Rulings of the Comptrollers, Opinions of the Attorneys-General, etc. Index. Pp. 49. 1901.



OFFICE OF FIBER INVESTIGATIONS.

[Fiber investigations were begun in the Division of Statistics in November, 1889, under Charles Richards Dodge. The Office of Fiber Investigations was established in 1890, with Mr. Dodge in charge, and was discontinued June 30, 1898.]

ANNUAL REPORTS.

Annual Report upon Fiber Investigations for 1890. By Charles Richards Dodge, Special Agent. Pp. 451-470. 1891.

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Reprinted from Annual Report Secretary of Agriculture for 1892.

Report of the Special Agent in Charge of Fiber Investigations for 1893. By Charles Richards Dodge. Pp. i-iii, 567-584, Pl. I, fig. 1. 1894.

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No. 2. Recent facts regarding the ramie industry in America, with brief statements relating to manufacture in Europe, etc. By Charles Richards Dodge, Special Agent. Pp. 16. 1893.

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No. 3. A report on sisal hemp culture in the United States, with statements relating to the industry in Yucatan and the Bahama Islands, and brief considerations upon the question of machinery for extracting the fiber. By Charles Richards Dodge, Special Agent. Pp. 59, pls. 8, figs. 21. 1891.

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No. 4. A report on flax culture for fiber in the United States, including special reports on flax culture in Ireland, in Belgium, and in Austria, with statements relative to the industry in Russia. By Charles Richards Dodge, Special Agent. Pp. 93, pls. 2, figs. 12. 1892.

No. 5. A report on the leaf fibers of the United States, detailing results of recent investigations relating to Florida sisal hemp, the false sisal hemp plant of Florida, and other fiber-producing agaves, bowstring hemp, pineapple fiber, New Zealand flax, and bear grass. By Charles Richards Dodge, Special Agent. Pp. 73, pls. 10, figs. 12. 1893.

No. 6. A report on the uncultivated bast-fibers of the United States, including the history of previous experiments with the plants or fibers, and brief statements relating to the allied species that are produced commercially in the Old World. By Charles Richards Dodge, Special Agent. Pp. 54, pls. 5. 1894.

No. 7. A report on the cultivation of ramie in the United States, with statements concerning the practice in foreign countries, cost of cultivation and percentages of yield, the machine question, and preparation of the fiber for manufacture. By Charles Richards Dodge, Special Agent. Pp. 63, pls. 5, figs. 7. 1895.

No. 8. A report on the culture of hemp and jute in the United States, with statements concerning the practice in foreign countries, the preparation of the fiber for market, and remarks on the machine question. By Charles Richards Dodge, Special Agent. Pp. 43, pls. 3, figs. 4. 1896.

No. 9. A Descriptive Catalogue of Useful Fiber Plants of the World, including the Structural and Economic Classifications of Fibers. By Charles Richards Dodge, Special Agent. Pp. 361, pls. 12, figs. 103. 1897.

No. 10. A report on flax culture for seed and fiber in Europe and America. By Charles Richards Dodge, Special Agent. Pp. 80, pls. 4, figs. 5. 1898.

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Culture and Manufacture of Ramie and Jute in the United States. 1873. (See Rept. No. 8, Office of Secretary.)

Report on Jute Culture and the Importance of the Industry. 1883. (See Rept. No. 30, Office of Secretary.)

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Flax for Seed and Fiber in the United States. 1895. (See Farmers' Bulletin No. 27, Office of Secretary.)

Facts Concerning Ramie. 1895. (See Separate No. 22, Office of Secretary.)

Hemp Culture. 1896. (See Separate No. 38, Office of Secretary.)

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The Present Status of Flax Culture in the United States. 1898. (See Separate No. 109, Office of Secretary.)

SECTION OF FOREIGN MARKETS.

[Organized March 20, 1894, and no separate report issued before 1897. The purpose of the Section of Foreign Markets is to furnish information on the world's markets, with special reference to their demands for agricultural products.]

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[Discontinued June 30, 1891.]

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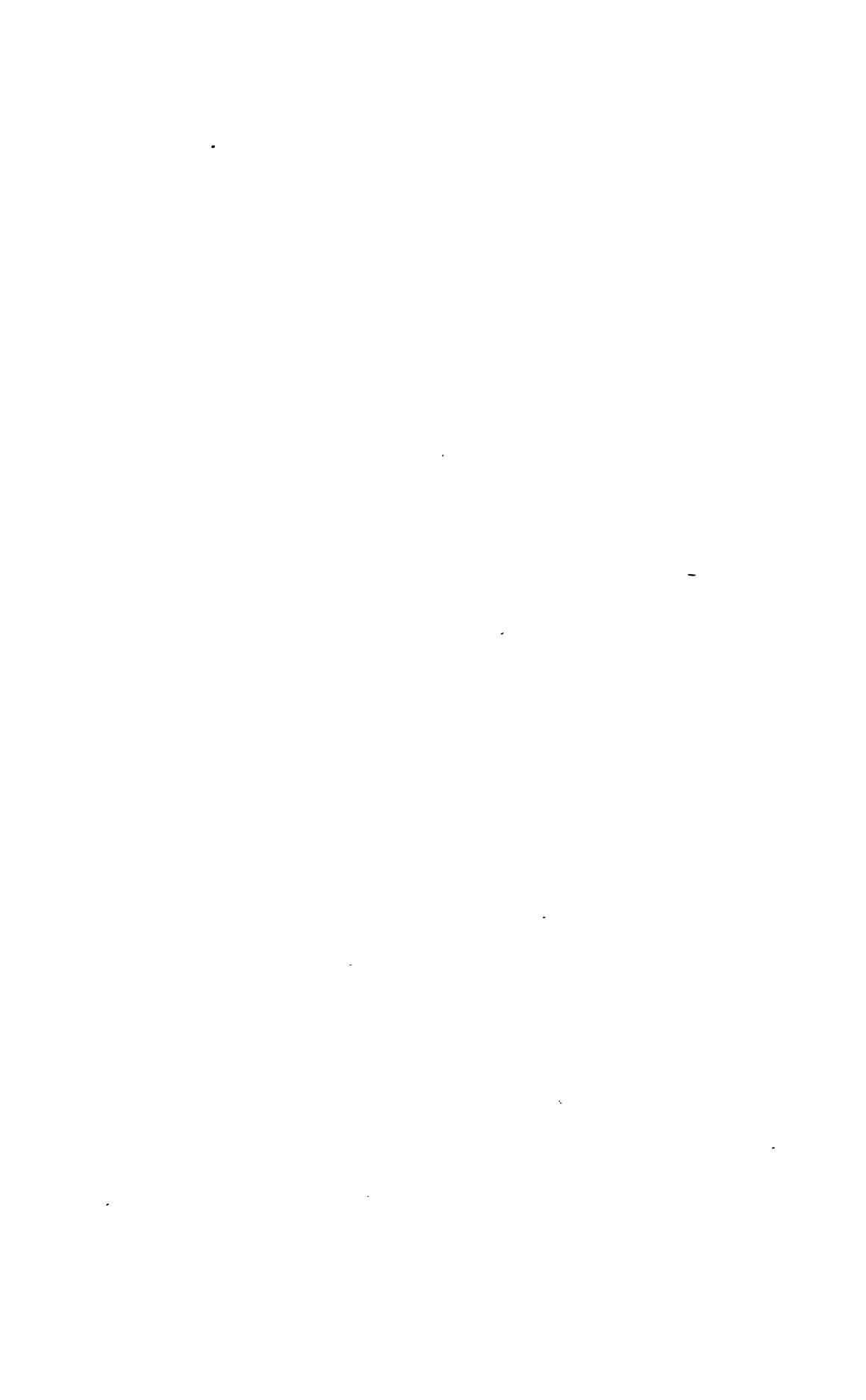
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No. 10. *A Report upon the Grasses and Forage Plants of Central Texas.* By H. L. Bentley, Special Agent in charge of Grass Experiments at Abilene, Tex. Prepared under the direction of the Agrostologist. Pp. 38, figs. 14. 1898.

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No. 12. *A Report upon the Grasses and Forage Plants and Forage Conditions of the Eastern Rocky Mountain Region.* By Thomas A. Williams, Assistant Agrostologist. Pp. 78, figs. 30. 1898.

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No. 23. Progress of Experiments in Forage Crops and Range Improvement at Abilene, Tex. By H. L. Bently, Special Agent in Charge of Experiments at Abilene, Tex. Pp. 20, fig. 1. 1900.

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No. 25. Turkestan Alfalfa. By P. Beveridge Kennedy, Ph. D., Expert and Agent in Charge of Experimental Work. Pp. 20. 1900.
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No. 27. Agrostological Notes. By F. Lamson-Scribner and Elmer D. Merrill. Pp. 10. 1901.

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No. 32. Some Arizona Grasses. By Elmer D. Merrill, Assistant in Charge of Collections. Pp. 10. 1901.

No. 33. Range Grass and Forage Plant Experiments at Highmore, S. Dak. Report of Progress. By F. Lamson-Scribner, Agrostologist. Pp. 5. 1901.

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No. 35. Agrostological Notes. By F. Lamson-Scribner, Agrostologist, and Elmer D. Merrill. Pp. 6. 1901.

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BUREAU OF ANIMAL INDUSTRY.

[The Bureau of Animal Industry was organized in June, 1884, with D. E. Salmon as Chief. The annual reports of the Chief of the Bureau are bound with those of the Secretary of Agriculture, and for some years have been issued in independent pamphlet form, known as author's editions.]

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^aThis circular first appeared December 19, 1893, unnumbered, as Directions for the Sterilization of Milk.

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DIVISION OF BOTANY.

[The Division of Botany was organized March, 1869, with C. C. Parry, as Chief Botanist. The annual reports of the Chief of this Division are bound with those of the Secretary of Agriculture, and for some years have been published in independent pamphlet form.]

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DIVISION OF CHEMISTRY.

[The Division of Chemistry was established August 21, 1862, by the appointment of Charles M. Wetherill as chemist. The annual reports of the Chief are bound with those of the Secretary of Agriculture, and they are also issued in independent form, known as author's editions.]

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[The Division of Entomology was established in 1863, by the appointment of Townend Glover as Entomologist. The annual reports of the Chief are bound with those of the Secretary of Agriculture, and for some years have been also issued in independent form, known as author's editions.]

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No. 14. The Periodical Cicada. An Account of *Cicada septendecim*, Its Natural Enemies and the Means of Preventing Its Injury, together with a Summary of the Distribution of the Different Broods. By C. L. Marlatt, M. S., First Assistant Entomologist. Pp. 148. Frontispiece, pls. 3, figs. 57. 1898.

No. 15. The Chinch Bug: Its Probable Origin and Diffusion, Its Habits and Development, Natural Checks, and Remedial and Preventive Measures, with Mention of the Habits of an Allied European Species. Prepared under the direction of the Entomologist. By F. M. Webster, Entomologist of the Ohio Agricultural Experiment Station. Pp. 82, figs. 19. 1898.

No. 16. The Hessian Fly in the United States. Prepared under the direction of the Entomologist. By Herbert Osborn, Professor of Zoology and Entomology, Iowa Agricultural College, Ames, Iowa. Pp. 58, frontispiece, pls. 2, figs. 8. 1898.

No. 17. Proceedings of the Tenth Annual Meeting of the Association of Economic Entomologists held at Boston, Mass., August 19 and 20, 1898. Prepared by the Secretary of Association, C. L. Marlatt, Assistant Entomologist. Pp. 104. 1898.

114 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

No. 18. Some Miscellaneous Results of the Work of the Division of Entomology. Prepared under the direction of L. O. Howard, Entomologist. Pp. 101, figs. 17. 1898.

No. 19. Some Insects Injurious to Garden and Orchard Crops. A series of articles dealing with insects of this class. Prepared under the direction of the Entomologist. By F. H. Chittenden, Assistant Entomologist. Pp. 99, figs. 20. 1899.

No. 20. Proceedings of the Eleventh Annual Meeting of the Association of Economic Entomologists. Pp. 111, figs. 4. 1899.

No. 21. Preliminary Report on the Insect Enemies of Forests in the Northwest. An account of the results gained from a reconnaissance trip made in the spring and early summer of 1899. Prepared under the direction of the Entomologist, by A. D. Hopkins, Ph. D., Vice-Director and Entomologist of the West Virginia Agricultural Experiment Station. Pp. 27. 1899.

No. 22. Some Miscellaneous Results of the Work of the Division of Entomology. Prepared under the direction of L. O. Howard, Entomologist. Pp. 109, figs. 28. 1900.

No. 23. Some Insects Injurious to Garden Crops. A series of articles dealing with insects of this class. Prepared under the direction of the Entomologist, by F. H. Chittenden, Assistant Entomologist. Pp. 92, figs. 23. 1900.

No. 24. A List of Works on North American Entomology. Compiled under the direction of the Entomologist, for the use of students and other workers, as well as for those about to begin the collecting and study of insects. By Nathan Banks, Assistant. Pp. 95. 1900.

No. 25. Notes on the Mosquitoes of the United States: Giving Some Account of their Structure and Biology, with Remarks on Remedies. By L. O. Howard, Ph. D., Entomologist. Pp. 70, figs. 22. 1900.

No. 26. Proceedings of the Twelfth Annual Meeting of the Association of Economic Entomologists. Pp. 102, pls. 2. 1900.

No. 27. Some Insects Injurious to the Violet, Rose, and Other Ornamental Plants. A collection of articles dealing with insects of this class. Prepared under the direction of the Entomologist, by F. H. Chittenden, Assistant Entomologist. Pp. 114, pls. 4, figs. 29. 1901.

BULLETINS (TECHNICAL SERIES).

No. 1. Revision of the Aphelininæ of North America. A subfamily of Hymenopterous Parasites of the family Chalcididæ. By L. O. Howard, Entomologist. Pp. 44, figs. 14. 1895.

No. 2. The Grass and Grain Joint-worm Flies and their Allies: A Consideration of Some North American Phytophagous Eurytominæ. By L. O. Howard, Entomologist. Pp. 24, figs. 10. 1896.

No. 3. Revision of the Nematinæ of North America, a Subfamily of Leaf-feeding Hymenoptera of the Family Tenthredinidæ. By C. L. Marlatt, First Assistant Entomologist. Index. Pp. 135, frontispiece, figs. 10. 1896.

No. 4. Some Mexican and Japanese Injurious Insects Liable to be Introduced into the United States. Pp. 56, figs. 6. 1896.

No. 5. A Study in Insect Parasitism: A Consideration of the Parasites of the White-marked Tussock Moth, with an Account of Their Habits and Interrelations and with Description of New Species. By L. O. Howard, Entomologist. Pp. 57, figs. 24. 1897.

No. 6. The San Jose Scale and its Nearest Allies. A Brief Consideration of the Characters which Distinguish these Closely Related Injurious Scale Insects. Prepared under the direction of the Entomologist, by T. D. A. Cockerell, Entomologist of the New Mexico Agricultural Experiment Station, Las Cruces, N. Mex. Pp. 31, figs. 15. 1897.

No. 7. Revision of the Tachinidae of America North of Mexico. A Family of Parasitic Two-winged Insects. By D. W. Coquillett. Index. Pp. 154. 1897.

No. 8. Contributions toward a Monograph of the American Aleurodidae. By A. L. Quaintance, M. S., Biologist and Horticulturist of the Georgia Agricultural Experiment Station, Experiment, Ga. The Red Spiders of the United States (Tetranychus and Stigmæus). By Nathan Banks, M. S., Assistant, Division of Entomology. Prepared under the direction of the Entomologist. Pp. 79, pls. 8, figs. 16. 1900.

CIRCULARS (SECOND SERIES).

[The first series of circulars of this Division was composed largely of circular letters of no interest bibliographically.]

No. 1. Condensed Information concerning Some of the More Important Insecticides. Pp. 7. 1891.

No. 2. The Hop Plant-louse and the Remedies to be Used Against It. Pp. 7, pl. 1, figs. 5. 1891.

No. 3. An Important Enemy to Fruit Trees: The San Jose Scale; Its Appearance in the Eastern United States; Measures to be taken to Prevent its Spread and to Destroy it. By L. O. Howard, Acting Entomologist. Pp. 10. 1893.

No. 4. The Army Worm (*Leucania unipuncta* Haw.). By L. O. Howard, Entomologist. Pp. 5, figs. 3. 1894.

No. 5. The Carpet Beetle, or "Buffalo Moth" (*Anthrenus scrophulariae* L.). By L. O. Howard, Entomologist. Pp. 4, fig. 1. 1894.

No. 6. The Mexican Cotton-boll Weevil (*Anthonomus grandis* Boh.). By L. O. Howard, Entomologist. Pp. 5, figs. 3. 1895.
Same. Spanish Edition. Pp. 6. 1895.

No. 7. The Pear-tree Psylla (*Psylla pyricola* Foerst.). By C. L. Marlatt, First Assistant Entomologist. Pp. 8, figs. 6. 1895.

No. 8. The Imported Elm Leaf-Beetle (*Galerucella intesta* Mull; *Galeruca xanthomelina* Schrank). By C. L. Marlatt, First Assistant Entomologist. Pp. 4, fig. 1. 1895.

No. 9. Canker-Worms. By D. W. Coquillett, Assistant, Division of Entomology. Pp. 4, figs. 3. 1895.

No. 10. The Harlequin Cabbage Bug or Calico Back (*Murgantia histrionica* Hahn). By L. O. Howard, Entomologist. Pp. 2. 1895.

No. 11. The Rose-chafer. By F. H. Chittenden, Assistant Entomologist. Pp. 4, fig. 1. 1895.

No. 12. The Hessian Fly (*Cecidomyia destructor* Say). By C. L. Marlatt, First Assistant Entomologist. Pp. 4. 1895.

No. 13. Mosquitoes and Fleas. By L. O. Howard, Entomologist. Pp. 6. 1896. Revised Edition. 1897.

No. 14. The Mexican Cotton-boll Weevil (*Anthonomus grandis* Boh.). By L. O. Howard, Entomologist. Revision of Circular No. 6. Pp. 8, figs. 5. 1896.

116 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

No. 15. General Work against Insects which Defoliate Shade Trees in Cities and Towns. By L. O. Howard, Entomologist. Pp. 4. 1896.

No. 16. The Larger Corn Stalk-Borer (*Diatrae saccharalis* Fab.): By L. O. Howard, Entomologist. Pp. 3, figs. 3. 1896.

No. 17. The Peach-Tree Borer (*Sannina exitiosa* Say). By C. L. Marlatt, First Assistant Entomologist. Pp. 4, fig. 1. 1896.

No. 18. The Mexican Cotton-boll Weevil (*Anthonomus grandis* Boh.). By L. O. Howard, Entomologist. Pp. 8, figs. 5. Revision of Circular No. 14. 1897.

Same. German Edition. Pp. 11, figs. 5. 1897.

Same. Revised Spanish Edition. Pp. 10, figs. 5. 1897.

No. 19. The Clover Mite (*Bryobia pratensis* Garman). By C. L. Marlatt, First Assistant Entomologist. Pp. 4, fig. 1. 1897.

No. 20. The Woolly Aphis of the Apple (*Schizoneura lanigera* Hansmann). By C. L. Marlatt, First Assistant Entomologist. Pp. 6, figs. 2. 1897.

No. 21. The Strawberry Weevil (*Anthonomus signatus* Say). By F. H. Chittenden, Assistant Entomologist. Pp. 7, figs. 4. 1897.

No. 22. The Periodical Cicada in 1897. By E. A. Schwarz, Assistant. Pp. 4. 1897.

No. 23. The Buffalo Tree-Hopper (*Ceresa bubalus* Fab.). By C. L. Marlatt, First Assistant Entomologist. Pp. 4, figs. 2. 1897.

No. 24. The Two-Lined Chestnut Borer (*Agrilus bilineatus* Weber). By F. H. Chittenden, Assistant Entomologist. Pp. 8, fig. 1. 1897.

No. 25. The Ox Warble (*Hypoderma lineata* Villers). By C. L. Marlatt, First Assistant Entomologist. Pp. 10, figs. 10. 1897.

No. 26. The Pear Slug (*Eriocampoides limacina* Retzius). By C. L. Marlatt, First Assistant Entomologist. Pp. 7, figs. 4. 1897.

No. 27. The Mexican Cotton-boll Weevil in 1897. By L. O. Howard, Entomologist. Pp. 7. 1898.

No. 28. The Box-Elder Plant-Bug (*Leptocoris trivittatus* Say). By L. O. Howard, Entomologist. Pp. 3, fig. 1. 1898.

No. 29. The Fruit-Tree Bark-Beetle (*Scolytus rugulosus* Ratz.). By F. H. Chittenden, Assistant Entomologist. Pp. 8, figs. 4. 1898.

No. 30. The Periodical Cicada in 1898. By E. A. Schwarz, Assistant Entomologist. Pp. 3. 1898.

No. 31. The Striped Cucumber Beetle (*Diabrotica vittata* Fab.). By F. H. Chittenden, Assistant Entomologist. Pp. 7, figs. 2. 1898.

No. 32. The Larger Apple-Tree Borers. By F. H. Chittenden, Assistant Entomologist. Pp. 12, figs. 3. 1898.

No. 33. Remedial Work Against the Mexican Cotton-boll Weevil. By L. O. Howard, Entomologist. Supplementary to Circular No. 18 and No. 27. Pp. 6. 1898.

No. 34. House Ants (*Monomorium pharaonis* et al.). By C. L. Marlatt, First Assistant Entomologist. Pp. 4, figs. 3. 1898.

No. 35. House Flies (*Musca domestica* et al.) By L. O. Howard, Entomologist. Pp. 8, figs. 6. 1898.

No. 36. The True Clothes Moths (*Tinea pellionella* et al.). By C. L. Marlatt, First Assistant Entomologist. Pp. 8, figs. 3. 1898.

No. 37. The Use of Hydrocyanic-acid Gas for Fumigating Greenhouses and Cold Frames. By Albert F. Woods and P. M. Dorsett. Pp. 10, figs. 3. 1899.

No. 38. The Squash-Vine Borer (*Melittia satyriniformis* Hbn.). By F. H. Chittenden, Assistant Entomologist. Pp. 6, figs. 2. 1899.

No. 39. The Common Squash Bug (*Anasa tristis* De G.). By F. H. Chittenden, Assistant Entomologist. Pp. 5, figs. 3. 1899.

No. 40. How to Distinguish the Different Mosquitoes of North America. By L. O. Howard, Entomologist, and D. W. Coquillett. Pp. 8, figs. 3. 1900.

No. 41. Regulations of Foreign Governments Regarding Importation of American Plants, Trees, and Fruits. By L. O. Howard, Entomologist. Pp. 4. 1900.

No. 42. How to Control the San Jose Scale. By C. L. Marlatt, First Assistant Entomologist. Pp. 6. 1900.

No. 43. The Destructive Green Pea Louse (*Nectarophora destructor* Johns.). By F. H. Chittenden, Assistant Entomologist. Pp. 8, figs. 3. 1901.

INSECT LIFE.

[A periodical devoted to the economy and life-habits of insects, especially in their relation to agriculture. Edited by Charles V. Riley and L. O. Howard, with the assistance of other members of the division force.]

Vol. I, Nos. 1-12. July, 1888, to June, 1889. Devoted to the Economy and Life-habits of Insects, especially in their Relations to Agriculture, and Edited by the Entomologist and Assistants. Index. Pp. i-viii, 388, ix-xxxii, figs. 76. 1888-1889.

Vol. II, Nos. 1-12. July, 1889, to June, 1890. Devoted to the Economy and Life-habits of Insects, especially in their Relations to Agriculture. Edited by C. V. Riley, Entomologist, and L. O. Howard, First Assistant, with the Assistance of Other Members of the Divisional Force. Index. Pp. i-viii, 418, figs. 71. 1889-1890.

Vol. III, Nos. 1-12. August, 1890, to August, 1891. Devoted to the Economy and Life-habits of Insects, especially in their Relations to Agriculture. Edited by C. V. Riley, Entomologist, and L. O. Howard, First Assistant, with the Assistance of Other Members of the Divisional Force. Index. Pp. i-viii, 519, pl. 1, figs. 36. 1891.

Vol. IV, Nos. 1-12. October, 1891, to August, 1892. Devoted to the Economy and Life-habits of Insects, especially in their Relations to Agriculture. Edited by C. V. Riley, Entomologist, and L. O. Howard, First Assistant, with the Assistance of Other Members of the Divisional Force. Index. Pp. i-viii, 441, figs. 77. 1892.

Vol. V, Nos. 1-5. September, 1892, to July, 1893. Devoted to the Economy and Life-habits of Insects, especially in their Relations to Agriculture. Edited by C. V. Riley, Entomologist, and L. O. Howard, First Assistant, with the Assistance of Other Members of the Divisional Force. Index. Pp. i-vii, 402, pls. 3, figs. 47. 1893.

Vol. VI, Nos. 1-5. November, 1893, to August, 1894. Devoted to the Economy and Life-habits of Insects, especially in their Relation to Agriculture. Edited by C. V. Riley, Entomologist, and L. O. Howard, First Assistant, with the Assistance of Other Members of the Divisional Force. Index. Pp. i-vi, 383, figs. 31. 1893-1894.

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Vol. VII, Nos. 1-5. September, 1894, to July, 1895. Devoted to the Economy and Life-habits of Insects, especially in their Relation to Agriculture. Edited by L. O. Howard, Entomologist, with the Assistance of Other Members of the Divisional Force. Index. Pp. i-v, 433, figs. 48. 1894-1895.

UNITED STATES ENTOMOLOGICAL COMMISSION.

[The Commission was attached to the United States Geological and Geographical Survey of the Territories, Department of the Interior, until March 3, 1881. The third report of the Commission inaugurated its transfer to the Department of Agriculture.]

REPORTS.

First Annual Report of the United States Entomological Commission, for 1877, relating to the Rocky Mountain Locust and the Best Methods of Preventing its Injuries and of Guarding Against its Invasions, in Pursuance of an Appropriation made by Congress for this purpose. By C. V. Riley and Others. Index. Pp. i-xvi, 478, 295, pls. 5, figs. 3, maps 2. 1878.

Second Report of the United States Entomological Commission, for 1878 and 1879, relating to the Rocky Mountain Locust and the Western Cricket and Treating of the Best Means of Subduing the Locust in Its Permanent Breeding Grounds, with a View of Preventing Its Migrations into the More Fertile Portions of the Trans-Mississippi Country, in Pursuance of Appropriations made by Congress for this purpose. By Charles V. Riley and Others. Index. Pp. i-xviii, 322, 80, pls. 17, maps 6. 1880.

Third Report of the United States Entomological Commission, relating to the Rocky Mountain Locust, the Western Cricket, the Army Worm, Canker Worms, and the Hessian Fly; together with Descriptions of Larvæ of Injurious Forest Insects, Studies on the Embryological Development of the Locust and of other Insects, and on the Systematic Position of the Orthoptera in Relation to other Orders of Insects. Index. Pp. i-xiv, 347, 11, 92, pls. 63, figs. 10, maps 3. 1883.

Fourth Report of the United States Entomological Commission: Being a Revised Edition of Bulletin No. 3, and the final Report on the Cotton Worm, together with a chapter on the Boll Worm. By Charles V. Riley, Ph. D., and Others. Index. Pp. i-xxxviii, 399, 147, pls. 64, figs. 45. 1885.

Fifth Report of the United States Entomological Commission, Being a Revised and Enlarged Edition of Bulletin No. 7, of the United States Entomological Commission, on Insects Injurious to Forest and Shade Trees. By Alpheus S. Packard. Pp. i-vii, 957, pls. 40, figs. 306. 1890. Also in H. Mis. Doc. No. 269, 51st Congress, 1st session.

OFFICE OF EXPERIMENT STATIONS.

[The Office of Experiment Stations was organized October 1, 1888, with W. O. Atwater as Director. The annual reports of the Director are bound with those of the Secretary of Agriculture, and for some years have also been issued in an independent form known as author's editions.]

ANNUAL REPORTS.

Report of the Director of the Office of Experiment Stations for 1888. By W. O. Atwater. In Annual Report Commissioner of Agriculture for 1888. Pp. 537-558.

Report of the Director of the Office of Experiment Stations for 1889. By W. O. Atwater. Index. Pp. 485-544, iv. 1890.
Reprinted from Annual Report Secretary of Agriculture for 1889.

Report of the Director of the Office of Experiment Stations for 1890. By W. O. Atwater. Index. Pp. 489-555, iii. 1891.
Reprinted from Annual Report Secretary of Agriculture for 1890.

Report of the Director of the Office of Experiment Stations for 1891. By A. W. Harris. Index. Pp. 503-538, ii, map. 1892.
Reprinted from Annual Report Secretary of Agriculture for 1891.

Report of the Director of the Office of Experiment Stations for 1892. By A. W. Harris. Index. Pp. i-iii, 515-549, iii. 1893.
Reprinted from Annual Report Secretary of Agriculture for 1892.

Report of the Director of the Office of Experiment Stations for 1893. By A. C. True. Index. Pp. i-iii, 417-464, ii. 1894.
Reprinted from Annual Report Secretary of Agriculture for 1893.

Report of the Director of the Office of Experiment Stations for 1894. By A. C. True. Pp. i-iii, 123-131. 1895.
Reprinted from Annual Report Secretary of Agriculture, in Message and Documents for 1893-1894.

Report of the Director of the Office of Experiment Stations for 1895. By A. C. True. Pp. i-iii, 131-143. 1895.
Reprinted from Annual Report Secretary of Agriculture, in Message and Documents for 1895.

Report of the Director of the Office of Experiment Stations for 1896. By A. C. True. Pp. i-iii, 123-143. 1896.
Reprinted from Annual Report Secretary of Agriculture, in Message and Documents for 1896.

Report of the Director of the Office of Experiment Stations for 1897. By A. C. True. Pp. i-iii, 117-139. 1897.
Reprinted from Annual Reports Department of Agriculture for 1897.

Report of the Director of the Office of Experiment Stations for 1898. By A. C. True. Pp. i-iii, 103-126. 1898.
Reprinted from Annual Reports Department of Agriculture for 1898.

Report of the Director of the Office of Experiment Stations for 1899. By A. C. True. Pp. i-iii, 119-153. 1899.
Reprinted from Annual Reports Department of Agriculture for 1899.

Report of the Director of the Office of Experiment Stations for 1900. By A. C. True. Pp. i-ii, 165-210. 1900.
Reprinted from Annual Reports Department of Agriculture for 1900.

EXPERIMENT STATION RECORD.

[A periodical containing a condensed record of the contents of the bulletins and reports issued by the agricultural experiment stations of the United States, and also a brief review of agricultural science of the world.]

Vol. I, Nos. 1-6. September, 1898-July, 1890. Index. Pp. i-vi, 358.

Vol. II, Nos. 1-12. August, 1890-July, 1891. Index. Pp. i-xxxii, 853.

Vol. III, Nos. 1-12. August, 1891-July, 1892. Index. Pp. i-xxxviii, 1059.
No. 12 includes a list of all the publications of the various experiment stations issued prior to January, 1892.

Vol. IV, Nos. 1-12. August, 1892-July, 1893. Index. Pp. i-xxx, 1086.

Vol. V, Nos. 1-12. 1893-1894. Index. Pp. i-xxxiv, 1227.

Vol. VI, Nos. 1-12. 1894-1895. Index. Pp. i-xii, 1134.

Vol. VII, Nos. 1-12. 1895-1896. Index. Pp. i-xii, 1092.

Vol. VIII, Nos. 1-12. 1896-1897. Index. Pp. i-xiv, 1128.

Vol. IX, Nos. 1-12. 1897-1898. Index. Pp. i-xvi, 1198.

Vol. X, Nos. 1-12. 1898-1899. Index. Pp. i-xvi, 1208.

Vol. XI, Nos. 1-12. 1899-1900. Index. Pp. i-xv, 1208.

Vol. XII, Nos. 1-12. 1900-1901. Index. Pp. i-xvi, 1189.

MISCELLANEOUS REPORTS.

Silos and Ensilage. 1882. (See Special Report No. 48, old series, Division of Statistics.)

Results of Field Experiments with Various Fertilizers. 1883. (See Report No. 31, Office of Secretary.)

Address before the Convention of Agricultural Colleges and Experiment Stations. 1885. (See Report No. 37, Office of Secretary.)

Association of American Agricultural Colleges and Experiment Stations. Convention held at the Department of Agriculture, Washington, D. C., October, 1887. 1888. (See Report No. 45, Office of Secretary.)

The What and Why of Agricultural Experiment Stations. 1889. (See Farmers' Bulletin No. 1, Office of Secretary.)

The Work of the Agricultural Experiment Stations. 1890. (See Farmers' Bulletin No. 2, Office of Secretary.)

Milk Fermentations and Their Relations to Dairying. 1892. (See Farmers' Bulletin No. 9, Office of Secretary.)

The Rape Plant: Its History, Culture, and Uses. 1893. (See Farmers' Bulletin No. 11, Office of Secretary.)

Suggestions Regarding the Cooking of Food. By Edward Atkinson. With introductory statements regarding the nutritive value of common food materials. By Mrs. Helen H. Richards. 1894. (See Report No. 54, Office of Secretary.)

Fertilizers for Cotton. 1894. (See Farmers' Bulletin No. 14, Office of Secretary.)

Leguminous Plants for Green Manuring and for Feeding. 1894. (See Farmers' Bulletin No. 16, Office of Secretary.)

Forage Plants for the South. 1894. (See Farmers' Bulletin No. 18, Office of Secretary.)

Barnyard Manure. 1894. (See Farmers' Bulletin No. 21, Office of Secretary.)

Foods: Nutritive Value and Cost. 1894. (See Farmers' Bulletin No. 23, Office of Secretary.)

The Feeding of Farm Animals. 1895. (See Farmers' Bulletin No. 22, Office of Secretary.)

Peanuts: Culture and Uses. 1895. (See Farmers' Bulletin No. 25, Office of Secretary.)

Sweet Potatoes: Culture and Uses. 1895. (See Farmers' Bulletin No. 26, Office of Secretary.)

Souring of Milk and other Changes in Milk Products. 1895. (See Farmers' Bulletin No. 29, Office of Secretary.)

Silos and Silage. 1895. (See Farmers' Bulletin No. 32, Office of Secretary.)

Education and Research in Agriculture in the United States. 1895. (See Separate No. 2, Office of Secretary.)

Food and Diet. 1895. (See Separate No. 17, Office of Secretary.)

Meats: Composition and Cooking. 1896. (See Farmers' Bulletin No. 34, Office of Secretary.)

Potato Culture. 1896. (See Farmers' Bulletin No. 35, Office of Secretary.)

Cotton Seed and Its Products. 1896. (See Farmers' Bulletin No. 36, Office of Secretary.)

Kafir Corn: Characteristics, Culture, and Uses. 1896. (See Farmers' Bulletin No. 37, Office of Secretary.)

Onion Culture. 1896. (See Farmers' Bulletin No. 39, Office of Secretary.)

Commercial Fertilizers: Composition and Use. 1896. (See Farmers' Bulletin No. 44, Office of Secretary.)

Irrigation in Humid Climates. 1896. (See Farmers' Bulletin No. 46, Office of Secretary.)

Food and Diet Charts. By Prof. W. O. Atwater. One set of Four Charts. Size 26 by 40 inches. 1896.

The Feeding Value of Corn Stover. 1897. (See Separate No. 76, Office of Secretary.)

Agricultural Education and Research in Belgium. 1897. (See Separate No. 78, Office of Secretary.)

The Manuring of Cotton. 1897. (See Farmers' Bulletin No. 48, Office of Secretary.)

Sheep Feeding. 1897. (See Farmers' Bulletin No. 49, Office of Secretary.)

Experiment Station Work—I. 1897. (See Farmers' Bulletin No. 56, Office of Secretary.)

Experiment Station Work—II. 1898. (See Farmers' Bulletin No. 65, Office of Secretary.)

Experiment Station Work—III. 1898. (See Farmers' Bulletin No. 69, Office of Secretary.)

Experiment Station Work—IV. 1898. (See Farmers' Bulletin No. 73, Office of Secretary.)

Milk as Food. 1898. (See Farmers' Bulletin No. 74, Office of Secretary.)

Tomato Growing. 1898. (See Farmers' Bulletin No. 76, Office of Secretary.)

122 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

The Liming of Soils. 1898. (See Farmers' Bulletin No. 77, Office of Secretary.)

Experiment Station Work—V. 1898. (See Farmers' Bulletin No. 78, Office of Secretary.)

Experiment Station Work—VI. 1898. (See Farmers' Bulletin No. 79, Office of Secretary.)

Corn Culture in the South. 1898. (See Farmers' Bulletin No. 81, Office of Secretary.)

Experiment Station Work—VII. 1898. (See Farmers' Bulletin No. 84, Office of Secretary.)

Fish as Food. 1898. (See Farmers' Bulletin No. 85, Office of Secretary.)

Office of Experiment Stations. 1898. (See Separate No. 102, Office of Secretary.)

Popular Education for the Farmer in the United States. 1898. (See Separate No. 104, Office of Secretary.)

The Needs and Requirements of a Control of Feeding Stuffs. 1898. (See Separate No. 105, Office of Secretary.)

The Agricultural Outlook of the Coast of Alaska. 1898. (See Separate No. 106, Office of Secretary.)

Foods for Man. 1898. (See Separate No. 107, Office of Secretary.)

Usefulness of Reservoirs to Agriculture in the Irrigated Regions. 1899. (See Miscellaneous Reports, unnumbered, Office of Secretary.)

Experiment Station Work—VIII. 1899. (See Farmers' Bulletin No. 87, Office of Secretary.)

Experiment Station Work—IX. 1899. (See Farmers' Bulletin No. 92, Office of Secretary.)

Sugar as Food. 1899. (See Farmers' Bulletin No. 93, Office of Secretary.)

Experiment Station Work—X. 1899. (See Farmers' Bulletin No. 97, Office of Secretary.)

Experiment Station Work—XI. 1899. (See Farmers' Bulletin No. 103, Office of Secretary.)

Experiment Station Work—XII. 1899. (See Farmers' Bulletin No. 105, Office of Secretary.)

Some Types of American Agricultural Colleges. 1899. (See Separate No. 140, Office of Secretary.)

Some Results of Dietary Studies in the United States. 1899. (See Separate No. 141, Office of Secretary.)

Agricultural Experiments in Alaska. 1899. (See Separate No. 142, Office of Secretary.)

Experiment Station Work—XIII. 1899. (See Farmers' Bulletin No. 107, Office of Secretary.)

Farmers' Reading Courses. 1900. (See Farmers' Bulletin No. 109, Office of Secretary.)

Bread and the Principles of Bread Making. 1900. (See Farmers' Bulletin No. 112, Office of Secretary.)

Experiment Station Work—XIV. 1900. (See Farmers' Bulletin No. 114, Office of Secretary.)

Irrigation in Fruit Growing. 1900. (See Farmers' Bulletin No. 116, Office of Secretary.)

Experiment Station Work—XV. 1900. (See Farmers' Bulletin No. 119, Office of Secretary.)

Beans, Peas, and Other Legumes as Food. 1900. (See Farmers' Bulletin No. 121, Office of Secretary.)

Experiment Station Work—XVI. 1900. (See Farmers' Bulletin No. 122, Office of Secretary.)

The Work of the Agricultural Experiment Stations on Tobacco. 1900. (See Report No. 63, Office of Secretary.)

Work and Expenditures of the Agricultural Experiment Stations. 1900. (See Miscellaneous Reports, unnumbered, Office of Secretary.)

Experiment Station Work—XVII. 1901. (See Farmers' Bulletin No. 124, Office of Secretary.)

Eggs and Their Uses as Food. 1901. (See Farmers' Bulletin No. 128, Office of Secretary.)

Irrigation Investigations in California. 1901. (See Miscellaneous Reports, unnumbered, Office of Secretary.)

Agricultural Education in France. 1901. (See Separate No. 193, Office of Secretary.)

Practical Irrigation. 1901. (See Separate No. 201, Office of Secretary.)

The Value of Potatoes as Food. 1901. (See Separate No. 213, Office of Secretary.)

SEPARATES FROM OFFICE OF EXPERIMENT STATIONS PUBLICATIONS.

[These separates are given Office Experiment Stations document numbers. The numbers omitted are not assigned to separates.]

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No. —. Scientific Work of the Department of Agriculture. Address by Dr. Chas. W. Dabney, jr., Assistant Secretary of Agriculture, before the Convention of the Association of American Colleges and Experiment Stations held at Washington, D. C., Nov. 13-15, 1894. Pp. ii, 63-67. 1895.

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No. 175. The Pathology of Plants. Lines of Investigations that might be Undertaken by Experiment Stations. By B. T. Galloway. Pp. 725-735. 1896.

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No. 185. Physiological Rôle of Water in Plants. By Edmond Gain, Professor of Agricultural Physiology and Chemistry, University of Nancy, France. Pp. 21, fig. 1. 1896.

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No. 214. Nitrogen-Free Extract of Plants and Feeding Stuffs. By B. Tollens, Ph. D., Director of the Agricultural-Chemical Laboratory of the University of Göttingen, Germany. Pp. i-ii, 641-661. 1897.

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No. 247. Agricultural Education and Research in the Scandinavian Countries and Finland. By F. W. Woll, Assistant Professor of Chemistry, University of Wisconsin. Pp. 605-616 and 703-719, figs. 4. 1898.

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No. 253. Origin and Formation of Organic Matter in Plants. By P. P. Deherzin, Member of the Institute of France. Pp. i-ii, 903-916. 1898.

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No. 255. The Value of Experiments on the Metabolism of Matter and Energy. By C. F. Langworthy, Ph. D., Office of Experiment Stations. Pp. i-ii, 1003-1019. 1898.

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No. 271. Physical and Meteorological Researches, Principally on Solar Rays, made at the Station of Agricultural Climatology at the Observatory of Juvisy. By Camille Flammarion, Director of the Station. Pp. i-ii, 103-114 and 203-213, Pls. I-II, figs. 8. 1898.

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No. 334. Artificial Changes of Physical Properties of Soils. By Ewald Wollny, Ph. D., Professor in the Technical High School at Munich. 1900.

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No. 337. Memorial Address on Honorable Justin S. Morrill. By M. H. Buckingham, D. D., President of the University of Vermont. Pp. 30-36. 1900.

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No. 339. Methods of Seed Testing and Their Relation to the Farm and Garden. By A. J. Pieters, Division of Botany, U. S. Department of Agriculture. Pp. 55-59. 1900.

No. 340. The Principles Underlying the Formation of an Agricultural Course in the South. By C. E. Coates, jr., Ph. D., Professor of Chemistry, Louisiana State University and Agricultural and Mechanical College. Pp. 59-64. 1900.

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No. 342. Making a Garden Herbarium and Its Uses. By A. D. Selby, B. S., Botanist, Ohio Experiment Station.—The Making of a Horticultural Herbarium. By J. Burtt-Davy, Assistant Botanist, California Experiment Station.—Laboratory Work for Winter Instruction in Horticulture. By E. S. Goff, Horticulturist, Wisconsin Experiment Station. Pp. 92-96. 1900.

No. 343. The Practical Importance of Industrials. By W. F. Gilkison, B. S., Professor of Mechanics, University of Wyoming. Pp. 96-98. 1900.

No. 344. The Electrical Engineering Laboratory in Its Relations to Local Engineering Work. By C. L. Cory, M. M. E., Associate Professor of Electrical Engineering, University of California. Pp. 99-103. 1900.

No. 345. The Agricultural Engineer. By W. T. Magruder, M. E., Professor of Mechanical Engineering, Ohio State University. Pp. 103-105. 1900.

No. 346. Some Objections to Early Differentiation of Engineering Courses. By J. C. Nagle, C. E., Professor of Civil Engineering and Physics, State Agricultural and Mechanical College of Texas. Pp. 106-109. 1900.

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No. 371. Duty of Water in Nebraska, by Special Agent O. V. P. Stout, Professor of Civil Engineering, University of Nebraska.—Duty of Water Under the Amity Canal, by Special Agent Thomas Berry, Chief Engineer of the Great Plains Water Company.—Duty of Water in Wyoming, by C. T. Johnston, Assistant in Irrigation Investigations.—Duty of Water in the Gallatin Valley, by Samuel Fortier, Professor of Irrigation Engineering, Montana College of Agriculture and Mechanic Arts.—Duty of Water on Big Cottonwood Creek, Utah, by Special Agent R. C. Gemmell, State Engineer of Utah.—Duty of Water under the Logan and Richmond Canal, by Special Agent George L. Swendsen, Professor of Civil Engineering, Agricultural College of Utah.—Duty of Water as Related to the Irrigation Problems of the Boise Valley, Idaho, by Special Agent D. W. Ross, State Engineer of Idaho. Pp. i-iv, 149-248, Pls. X-XLIX, figs. 14-18. 1901.

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No. 3. Report of a Meeting of Horticulturists of the Agricultural Experiment Stations at Columbus, Ohio, June 13-14, 1889. By A. W. Harris, Assistant Director. Pp. 12. 1889.

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No. 11. A Compilation of Analyses of American Feeding Stuffs. By E. H. Jenkins, Ph. D., and A. L. Winton, Ph. B. Index. Pp. 155. 1892.

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No. 28. *The Chemical Composition of American Food Materials*. By W. O. Atwater, Ph. D., and Chas. D. Woods, B. S. Pp. 47, figs. 4. 1896. Revised Edition. By W. O. Atwater, Ph. D., and A. P. Bryant, M. S. 1899.

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No. 40. *Dietary Studies in New Mexico in 1895*. By Arthur Goss, M. S., Professor of Chemistry, New Mexico College of Agriculture and Mechanic Arts. Pp. 23. 1897.

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No. 48. A Report to Congress on Agriculture in Alaska, including Reports by Walter H. Evans, Benton Killin, and Sheldon Jackson. Prepared under the supervision of A. C. True, Director of the Office of Experiment Stations. Pp. 36, pls. 23. 1898. (Also H. Doc. No. 160, 55th Congress, 2d session.)

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No. 51. Statistics of the Land-Grant Colleges and Agricultural Experiment Stations in the United States for the Year ended June 30, 1897. Pp. 39. 1898.

No. 52. Nutrition Investigations in Pittsburg, Pa., 1894-1896. By Isabel Bevier, Professor of Natural Science in the Pennsylvania College for Women, Pittsburg. Pp. 48. 1898.

No. 53. Nutrition Investigation at the University of Tennessee in 1896 and 1897. By Chas. E. Waite, Ph. D., F. C. S., Professor of Chemistry in the University of Tennessee. Pp. 46, figs. 2. 1898.

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No. 58. Water Rights on the Missouri River and Its Tributaries. By Elwood Mead, State Engineer of Wyoming. With Papers on the Water Laws of Colorado, by John E. Field, State Engineer, and of Nebraska by J. M. Wilson, State Engineer. Pp. 80, pls. 3, figs. 4. 1899.

No. 59. Organization Lists of the Agricultural Colleges and Experiment Stations in the United States, with a List of Agricultural Experiment Stations in Foreign Countries. Pp. 115. 1899.

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No. 63. Description of a New Respiration Calorimeter and Experiments on the Conservation of Energy in the Human Body. By W. O. Atwater, Ph. D., Professor of Chemistry, Wesleyan University, and E. B. Rosa, Ph. D., Professor of Physics, Wesleyan University. Pp. 94, pls. 8, figs. 12. 1899.

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No. 66. The Physiological Effects of Creatin and Creatinin and Their Value as Nutrients. By J. W. Mallet, M. D., L. L. D., Professor of Chemistry in the University of Virginia. Pp. 24. 1899.

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No. 70. Water-Right Problems of Bear River. By Clarence T. Johnston and Joseph A. Breckons. Pp. 40, pls. 9. 1899.

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No. 72. Farmers' Reading Courses. By L. H. Bailey, M. S., Professor of Horticulture, Cornell University. A history of the organization of farmers' reading courses and a description of the plans under which they are conducted. Pp. 36. 1899.

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No. 75. Dietary Studies of University Boat Crews. By W. O. Atwater and A. P. Bryant. Pp. 72. 1900.

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No. 80. The Agricultural Experiment Stations in the United States. By A. C. True and V. A. Clark.—The Paris Exposition, 1900. Prepared to accompany the Experiment Station Exhibit. Contributed to by the Association of American Agricultural Colleges and Experiment Stations. Pp. 636, frontispiece, pls. 153. 1900.

No. 81. The Use of Water in Irrigation in Wyoming and Its Relation to the Ownership and Distribution of the Natural Supply. By B. C. Buffum, M. S., Professor of Agriculture and Horticulture, University of Wyoming, and Vice-Director of Wyoming Agricultural Experiment Station. Pp. 56, pls. 8. 1900.

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No. 88. Organization Lists of the Agricultural Colleges and Experiment Stations in the United States, with a List of Agricultural Experiment Stations in Foreign Countries. Pp. 134. 1901.

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No. 92. The Reservoir System of the Cache La Poudre Valley. By E. S. Nettleton. Pp. 48, pls. 14. 1901.

No. 93. A Report on the Work and Expenditures of the Agricultural Experiment Stations for the Year Ended June 30, 1900. By A. C. True, Director of the Office of Experiment Stations. Pp. 181, pls. 8. 1901.

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No. 2. Proceedings of the Third Annual Convention of the Association of American Agricultural Colleges and Experiment Stations, held at Washington, D. C., Nov. 12, 13, 14, and 15, 1889. Edited by A. W. Harris for the Office of Experiment Stations, and H. E. Alvord for the Executive Committee of the Association. Index. Pp. 142. 1890.

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No. 3. Letter Asking for a list of Originators of New and Improved Fruits and Vegetables, etc. Pp. 3. 1889.

No. 4. Memorandum of Station Reports. Pp. 4. 1889.

No. 5. Call for Meeting of Stations in Washington, D. C., March 5, 1889, to Discuss Cooperative Field Experiments. P. 1. 1889.

No. 6. List of Originators of Fruits, Vegetables, etc., in the United States, with Addresses and Names of Specialties. Pp. 8. 1889.

No. 7. Cooperative Field Experiments with Fertilizers. Pp. 39. 1889.

No. 8. Explanations and Directions for Soil Tests with Fertilizers. Pp. 11. 1889.

No. 9. Memorandum of Information for a Report on Farmers' Institutes in the United States. Pp. 4. 1889.

No. 10. Letter Asking for Reports Regarding Special Horticultural Work. Pp. 6. 1889.

No. 11. Rules for Naming Vegetables. Report of Committee of Experiment Station Horticulturists. Pp. 3. 1889.

No. 12. Regarding the Library and Publications of the Office of Experiment Stations. By W. O. Atwater, Director of Office of Experiment Stations. Pp. 3. 1889.

No. 13. Letter Relative to Meeting of Station Specialists. By W. O. Atwater, Director. Pp. 3. 1889.

No. 14. Letter Announcing Meeting of Association of Economic Entomologists. Pp. 3. 1889.

No. 15. Inquiries Regarding Investigations in Botany at the Agricultural Colleges and Experiment Stations. Pp. 4. 1890.

No. 16. Blank Applications for Technical Publications of the Office of Experiment Stations. Pp. 2. 1890.

No. 17. Letter to Manufacturers of Spray Machinery. Pp. 2. 1890.

No. 18. List of Originators of Fruits and Vegetables in the United States, with Addresses and Names of Specialties. Pp. 12. 1891.

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No. 19. Circular Letter Relative to Cooperation in Experiments with Fertilizers on Fruits and Vegetables, to Study the Feeding Capacities of the Plants, and the Variations Due to the Action of Fertilizers. By W. O. Atwater, Director. Pp. 4. 1891.

No. 20. Organization List of the Agricultural Experiment Stations in the United States. Pp. 21. 1891.

No. 21. List of Delegates and Visitors who were in Attendance upon the Fifth Annual Convention of the Association of American Agricultural Colleges and Experiment Stations. Pp. 4. 1891.

No. 22. Letter Relative to Subject Index of the Literature of Agricultural Experiment Stations and Kindred Institutions. By A. W. Harris, Director. Pp. 4. 1891.

No. 23. Key to Subject Index of Literature of Agricultural Experiment Stations and Kindred Institutions. Pp. 3. 1893.
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No. 24. Address List of the Agricultural Experiment Stations. P. 1. 1893.

No. 25. Canaigre (*Rumex hymenosepalus*). Pp. 4. 1894.
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No. 26. Address List of Agricultural Colleges and Experiment Stations. Pp. 4. 1894.

No. 27. Statistics of Agricultural Colleges and Experiment Stations, 1894. Pp. 18. 1895.

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No. 32. Report of Committee on Methods of Teaching Agriculture. Pp. 20. 1897.
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No. 33. Civil Service in the Department of Agriculture. By Charles W. Dabney, jr., Assistant Secretary of Agriculture. Pp. 10. 1897.

No. 34. Rules and Apparatus for Seed Testing. By A. C. True, Director. Pp. 9, figs. 2. 1897.

No. 35. Statistics of Land-grant Colleges and Agricultural Experiment Stations, 1896. By A. C. True, Director. Pp. 18. 1897.

No. 36. Constitution of the Association of American Agricultural Colleges and Experiment Stations. Pp. 4. 1897.

No. 37. Second Report of the Committee on Methods of Teaching Agriculture. Pp. 4. 1897.

No. 38. Some Books on Agriculture and Sciences Related to Agriculture, published 1896-1898. Prepared by the Office of Experiment Stations with the cooperation of the Library of the Department of Agriculture. Pp. 45. 1898.

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No. 40. Land-grant and Other Colleges and the National Defense. By Charles W. Dabney, Ph. D., President of the University of Tennessee. Pp. 15. 1899.

No. 41. Fourth Report of Committee on Methods of Teaching Agriculture. Pp. 7. 1899.

No. 42. A German Common School with a Garden. By C. B. Smith, Office of Experiment Stations. Pp. 7, figs. 2. 1899.

No. 43. Food Nutrients—Food Economy. By A. C. True, Director. Pp. 6. 1899. Revised edition, 1900.

No. 44. Agricultural Experiment Stations in the United States. By A. C. True, Director. Pp. 8. 1900.

No. 45. Fifth Report of Committee on Method of Teaching Agriculture. Pp. 8. 1901.

No. 46. The Functions and Uses of Food. By C. F. Langworthy, Ph. D., Office of Experiment Stations. Pp. 10. 1901.



DIVISION OF FORESTRY.

[The work in forestry under the auspices of the Department began in 1876 by the appointment of Franklin B. Hough as special agent. The Division of Forestry was organized by order of the Commissioner of Agriculture in 1881, but was not recognized by Congress as a Division until 1886. The annual reports of the Chief are bound with those of the Secretary of Agriculture, and for some years have also been issued in an independent form, known as author's editions.]

ANNUAL REPORTS.

Report of the Chief of the Division of Forestry for 1883. By N. H. Egleston. In Annual Report of the Commissioner of Agriculture for 1883. Pp. 444-462.

Report of the Chief of the Division of Forestry for 1884. By N. H. Egleston. In Annual Report of the Commissioner of Agriculture for 1884. Pp. 137-180.

Report of the Chief of the Division of Forestry for 1885. By N. H. Egleston. In Annual Report of the Commissioner of Agriculture for 1885. Pp. 183-206, diagrams 3.

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Reprinted from Annual Report Commissioner of Agriculture for 1886.

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Report of the Chief of the Division of Forestry for 1889. By B. E. Farnow. Pp. i-iv, 273-330, figs. 3. 1890.
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Report of the Chief of the Division of Forestry for 1890. By B. E. Farnow. Pp. i-iii, 193-236. 1891.
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Report of the Chief of the Division of Forestry for 1892. By B. E. Farnow. Pp. i-iii, 293-358, pls. 6, diagram 1. 1893.
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Report of the Chief of the Division of Forestry for 1893. By B. E. Farnow. Pp. i-iv, 303-364, pls. 3, figs. 4. 1894.
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Report of the Chief of the Division of Forestry for 1894. By B. E. Farnow. In Report of the Secretary of Agriculture in Message and Documents for 1893-1894. Pp. 133-142.

Report of the Chief of the Division of Forestry for 1895. By B. E. Farnow. In Annual Report of the Secretary of Agriculture in Message and Documents for 1895. Pp. 149-152.

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Report of the Chief of the Division of Forestry for 1897. By B. E. Farnow. Pp. i-ii, 141-146. 1897.

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Reprinted from Annual Reports Department of Agriculture for 1898.

Report of the Forester for 1899. By Gifford Pinchot. Pp. i-iii, 93-100. 1899.

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Report upon Forestry, 1878-1879. Prepared under the Direction of the Commissioner of Agriculture in Pursuance of an Act of Congress Approved Aug. 15, 1876. 1880. (See Special Reports, Office of Secretary.)

Report on Forestry, submitted to Congress by the Commissioner of Agriculture. 1882. (See Special Reports, Office of Secretary.)

Letter from the Agent of the Forestry Division, requesting Information as to the Extent of the Lumber and Wood Trade. 1883.

Preliminary Report on the Forestry of the Mississippi Valley and Tree Planting and Growing on the Plains. 1883. (See Report No. 28, Office of Secretary.)

Report on Forestry, 1884. 1884. (See Special Report, Office of Secretary.)

The Proper Value and Management of Government Timber Lands and the Distribution of North American Forest Trees. 1894. (See Miscellaneous Special Report No. 5, Office of Secretary.)

Destruction of the Evergreen and Other Forest Trees in Northern New England and New York. 1885. (See Miscellaneous Reports, unnumbered, Office of Secretary, and Miscellaneous Reports, Division of Entomology.)

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Circular Issued for the Information of Railroad Managers. Pp. 4. 1887.

Instructions for the Collection of Test Pieces of Pines for Timber Investigations. Pp. 4. n. d.

Forestry in the United States. 1890. (See Miscellaneous Special Report No. 1, Division of Statistics.)

Letter to the Secretary of Agriculture from B. E. Farnow, regarding Forest Growths in the United States. Pp. 4. 1893.

Letter from the Secretary of Agriculture, in response to Senate resolution July 31, transmitting information in relation to investigations and experiments in the planting of native pine seed for growth of native pine in the sand hills of the Northwest 1894. (See Miscellaneous Reports, unnumbered, Office of Secretary.)

Statement of B. E. Farnow, Chief of the Forestry Division, to the Committee on Agriculture, House of Representatives, February 16, 1895. Pp. 4. 1895.

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Tree Planting in the Western Plains. 1896. (See Separates Nos. 51 and 58, Office of Secretary.)

The Lessons of Erosion Due to Forest Destruction. 3 charts, 30 $\frac{1}{2}$ by 48 $\frac{1}{2}$ inches. 1896.

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The Uses of Wood. 1897. (See Separate No. 79, Office of Secretary.)

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Trees of the United States Important in Forestry. 1898. (See Separate No. 112, Office of Secretary.)

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The Practice of Forestry by Private Owners. 1900. (See Separate No. 187, Office of Secretary.)

Forest Extension in the Middle West. 1901. (See Separate No. 212, Office of Secretary.)

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No. 2. Report on the Forest Conditions of the Rocky Mountains, and Other Papers; with a Map showing the Location of Forest Areas on the Rocky Mountain Range. Prepared under the instructions of Hon. Norman J. Colman, Commissioner. Index. Pp. 252, diagrams 2, map. 1. 1888.

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No. 3. Preliminary Report on the Use of Metal Track on Railways as a Substitute for Wooden Ties; by E. E. Russell Tratman, C. E., to which is Added a Report of Experiments in Wood Seasoning by the Chicago, Burlington and Quincy Railroad Company, and Other Notes. Compiled by B. E. Farnow, Chief of the Division of Forestry. Index. Pp. 79, diagrams 6. 1889.

No. 4. Report on the Substitution of Metal for Wood in Railroad Ties. By E. E. Russell Tratman, C. E. Together with a Discussion on Practicable Economics in the Use of Wood for Railway Purposes. By B. E. Farnow, Chief of the Division of Forestry. Index. Pp. 363, pls. 30. 1890.

No. 5. What is Forestry? By B. E. Farnow, Chief of the Division of Forestry. Pp. 52. 1891.

No. 6. Timber Physics. Part 1. Preliminary Report. 1. Need of the Investigation. 2. Scope and Historical Development of the Science of "Timber Physics." 3. Organization and Methods of the Timber Examinations in the Division of Forestry. Compiled by B. E. Farnow, Chief of the Division of Forestry. Index. Pp. 57, pls. 6, figs. 10. 1892.

No. 7. Forest Influences. 1. Introduction and Summary of Conclusions. By B. E. Farnow. 2. Review of Forest Meteorological Observations: A Study Preliminary to the Discussion of the Relation of Forests to Climate. By M. W. Harrington. 3. Relation of Forests to Water Supplies. By B. E. Farnow. 4. Notes on the Sanitary Significance of Forests. By B. E. Farnow. Appendices. 1. Determination of the True Amount of Precipitation and its Bearing on Theories of Forest Influences. By Cleveland Abbe. 2. Analysis of Rainfall with Relation to Surface Conditions. By George E. Curtis. Index. Pp. 197, figs. 63. 1893.

No. 8. Timber Physics. Part II. Progress Report. Results of Investigations on Long-Leaf Pine (*Pinus palustris*). 1. Introductory. 2. Mechanical Tests Made at Washington University Testing Laboratory, St. Louis, Mo. 3. The Long-Leaf Pine: Its Characteristics and Distribution. 4. Results of Mechanical Tests. Johnson. 5. Field Report regarding Turpentine Timber. Roth. 6. Resinous Contents and their Distribution in the Long-Leaf Pine. Gomberg. 7. Field Records of Test Material. Mohr. Under the Direction of B. E. Farnow, Chief of the Division of Forestry. Pp. 92, pls. 12, figs. 22. 1893.

No. 9. Report on the Use of Metal Railroad Ties, and on Preservative Processes and Metal Tie-plates for Wooden Ties. By E. E. Russell Tratman, A. M., Am. Soc. C. E. Supplementary to Report on the Substitution of Metal for Wood in Railroad Ties. 1890. Prepared under the Direction of B. E. Farnow, Chief of the Division of Forestry. Pp. 363, pls. 5. 1894.

No. 10. Timber: An Elementary Discussion of the Characteristics and Properties of Wood. By Filibert Roth, Special Agent in Charge of Timber Physics, under the Direction of B. E. Farnow, Chief of the Division of Forestry. Index. Pp. 88, figs. 49. 1895.

No. 11. Some Foreign Trees for the Southern States. Prepared under the Direction of B. E. Farnow, Chief of the Division of Forestry. Pp. 32, pls 3. 1895.

No. 12. Economical Designing of Timber Trestle Bridges. By A. L. Johnson, C. E. Prepared under the Direction of B. E. Farnow, Chief of the Division of Forestry. Pp. 57, fig. 7. 1896.

No. 13. The Timber Pines of the Southern United States. By Charles Mohr, Ph. D. Together with a Discussion of the Structure of Their Wood, by Filibert Roth. Prepared under the Direction of B. E. Farnow, Chief of the Division of Forestry. Pp. 160, pls. 27, figs. 18. 1896.

No. 14. Nomenclature of the Arborescent Flora of the United States. By George B. Sudworth, Dendrologist of the Division of Forestry. Prepared under the Direction of B. E. Farnow, Chief of the Division of Forestry. Pp. i-viii, 419. 1897.

No. 15. Forest Growth and Sheep Grazing in the Cascade Mountains of Oregon. By Frederick V. Coville. Pp. 54. 1898.

No. 16. Forestry Conditions and Interests of Wisconsin. By Filibert Roth, Special Agent. With a Discussion by B. E. Farnow, Chief of the Division of Forestry. Pp. 76, pl. 1. 1898.

No. 17. Check List of the Forest Trees of the United States, Their Names and Ranges. By George B. Sudworth, Dendrologist of the Division of Forestry. Prepared under the Direction of B. E. Farnow, Chief of the Division of Forestry. Pp. 144. 1898.

No. 18. Experimental Tree Planting in the Plains. By Charles A. Keffer, Assistant Chief of the Division of Forestry. Prepared under the Direction of B. E. Farnow, Chief of the Division of Forestry. Pp. 94, pls. 5, fig. 1. 1898.

No. 19. Osier Culture. By John M. Simpson. Prepared under the Direction of B. E. Farnow, Chief of the Division of Forestry. Pp. 27. 1898.

No. 20. Measuring the Forest Crop. By A. K. Mlodziansky, Assistant in the Division of Forestry. Prepared under direction of B. E. Farnow, Chief of the Division of Forestry. Pp. 71, figs. 16. 1898.

No. 21. Systematic Plant Introduction: Its Purposes and Methods. By David G. Fairchild, Special Agent in Charge of Seed and Plant Introduction. Prepared under the Direction of B. E. Farnow, Chief of the Division of Forestry. Pp. 24. 1898.

No. 22. The White Pine (*Pinus strobus* Linnæus). By V. M. Spalding, Professor of Botany in the University of Michigan. Revised and enlarged by B. E. Farnow, Chief of the Division of Forestry. With contributions: Insect Enemies of the White Pine, by F. H. Chittenden, Division of Entomology; The Wood of the White Pine, by Filibert Roth, Division of Forestry. Index. Pp. 185, pls. 13, figs. 40. 1899.

No. 23. Has not yet been issued.

No. 24. A Primer of Forestry. Part I. The Forest. By Gifford Pinchot, Forester, Agricultural Department. Pp. 88, frontispiece, pls. 47, figs. 83. 1899.

No. 25. Notes on the Forest Conditions of Porto Rico. By Robert T. Hill, Geologist, U. S. Geological Survey. Pp. 48, pls. 8, figs. 9. 1899.

No. 26. Practical Forestry in the Adirondacks. By Henry S. Graves, Superintendent of Working Plans. Pp. 85, pls. 20. 1899.

No. 27. Practical Tree Planting in Operation. By J. W. Toumey, Superintendent of Tree Planting. Pp. 27, pls. 4, fig. 2. 1900.

No. 28. A Short Account of the Big Trees of California. Prepared in the Division of Forestry. Pp. 30, pls. 17. 1900. (Also S. Doc. No. 393, 56th Congress, 1st session.)

No. 29. The Forest Nursery: Collection of Tree Seeds and Propagation of Seedlings. By George B. Sudworth, Dendrologist, Division of Forestry. Pp. 63, frontispiece, pls. 5, figs. 11. 1900.

No. 30. A Forest Working Plan for Township 40, Totten and Crossfield Purchase, Hamilton County, New York State Forest Preserve. By Ralph S. Hosmer, Field Assistant, and Eugene S. Bruce, Lumberman, Division of Forestry, U. S. Department of Agriculture, Preceded by a Discussion of Conservative Lumbering and the Water-Supply, by Frederick H. Newell, Hydrographer, U. S. Geological Survey. Pp. 64, frontispiece, pls. 11, maps 3. 1901.

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No. 1. A Request to Educators for Cooperation. Pp. 4. 1886.

No. 2. A Circular to Educational Men. P. 1. 1887.

No. 3. Increasing the Durability of Timber (Information to Wood Consumers). Pp. 4. 1887.

No. 4. For Information of Railroad Managers. By Norman J. Colman, Commissioner of Agriculture. Pp. 3. 1887.

No. 5. Arbor Day Planting in Eastern States. By B. E. Farnow, Chief of the Division of Forestry. Pp. 4. 1889.

No. 6. Instructions for Growing Tree Seedlings. By B. E. Farnow, Chief of the Division of Forestry. Pp. 4. 1890.

No. 7. The Government Timber Tests. By B. E. Farnow, Chief of the Division of Forestry. Pp. 4. 1891.

No. 8. Strength of "Boxed" or "Turpentine" Timber. By B. E. Farnow, Chief of the Division of Forestry. Pp. 3. 1892.

No. 9. Effect of Turpentine Gathering on the Timber of Long-leaf Pine. By B. E. Farnow, Chief of the Division of Forestry. P. 1. 1893.

No. 10. Suggestions to the Lumbermen of the United States in Behalf of More Rational Forest Management. By B. E. Farnow, Chief of the Division of Forestry. Pp. 8. 1893.

No. 11. Facts and Figures Regarding our Forest Resources Briefly Stated. By B. E. Farnow, Chief of the Division of Forestry. Pp. 8. 1896.

No. 12. Southern Pine: Mechanical and Physical Properties. By B. E. Farnow, Chief of the Division of Forestry. Pp. 12, diagrams 4. 1896.

No. 13. Forest Fire Legislation in the United States. By B. E. Farnow, Chief of the Division of Forestry. Pp. 8. 1896.

No. 14. Is Protection Against Forest Fires Practicable? By B. E. Farnow, Chief of the Division of Forestry. Pp. 4. 1896.

No. 15. Summary of Mechanical Tests on Thirty-two Species of American Woods. By B. E. Farnow, Chief of the Division of Forestry. Pp. 12, diagrams 2. 1897.

No. 16. Age of Trees and Time of Blazing Determined by Annual Rings. By B. E. Farnow, Chief of the Division of Forestry. Pp. 11, figs. 12. 1897.

No. 17. Recent Legislation on State Forestry Commissions and Forest Reserves. By B. E. Farnow, Chief of the Division of Forestry. Pp. 15. 1897.
Revised edition, pp. 16, 1897.

No. 18. Progress in Timber Physics. By B. E. Farnow, Chief of the Division of Forestry. Pp. 20, diagrams 11. 1898.

No. 19. Progress in Timber Physics. Bald Cypress (*Taxodium distichum*). By Filibert Roth, Division of Forestry. Pp. 24, fig. 1. 1898.

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No. 21. Practical Assistance to Farmers, Lumbermen, and others in Handling Forest Lands. By Gifford Pinchot, Forester. Pp. 5. 1898.

No. 22. Practical Assistance to Tree Planters. By Gifford Pinchot, Forester, Department of Agriculture. Pp. 11, figs. 5. 1899.
Revised edition, pp. 12, 1901.

DIVISION OF GARDENS AND GROUNDS.

[This division was established in 1862 as an experimental garden, with William Saunders as superintendent. The annual reports of the superintendent are bound with those of the Secretary of Agriculture, and for some years have also been issued in an independent form known as author's editions.]

ANNUAL REPORTS.

Report of the Superintendent of the Garden Attached to the Department of Agriculture for 1862. By William Saunders. In Annual Report Commissioner of Agriculture for 1862. Pp. 540-545.

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Report of the Superintendent of the Experimental Garden for 1867. By William Saunders. In Annual Report Commissioner of Agriculture for 1867. Pp. 23-31.

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Report of the Superintendent of Gardens and Grounds for 1869. By William Saunders. In Annual Report Commissioner of Agriculture for 1869. Pp. 79-91, Pls. II-V.

Report of the Superintendent of Gardens and Grounds for 1870. By William Saunders. In Annual Report Commissioner of Agriculture for 1870. Pp. 16-23, Pl. II.

Report of the Superintendent of Gardens and Grounds for 1871. By William Saunders. In Annual Report Commissioner of Agriculture for 1871. Pp. 102-109.

No reports printed in 1872, 1873, 1874, and 1875.

Report of the Superintendent of Gardens and Grounds for 1876. By William Saunders. In Annual Report Commissioner of Agriculture for 1876. Pp. 61-73.

Report of the Superintendent of Gardens and Grounds for 1877. By William Saunders. In Annual Report Commissioner of Agriculture for 1877. Pp. 47-65.

Report of the Superintendent of Gardens and Grounds for 1878. By William Saunders. In Annual Report Commissioner of Agriculture for 1878. Pp. 194-207, Pls. I-IV.

Report of the Superintendent of Gardens and Grounds for 1879. By William Saunders. In Annual Report Commissioner of Agriculture for 1879. Pp. 359-364, Pl. I.

No report printed in 1880.

144 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

Report of Superintendent of Gardens and Grounds for 1881-1882. By William Saunders. In Annual Report Commissioner of Agriculture for 1881-1882. Pp. 215-230.

Report of Superintendent of Gardens and Grounds for 1883. By William Saunders. In Annual Report Commissioner of Agriculture for 1883. Pp. 181-196.

No report printed in 1884.

Report of Superintendent of Gardens and Grounds for 1885. By William Saunders. In Annual Report Commissioner of Agriculture for 1885. Pp. 33-46.

Report of Superintendent of Gardens and Grounds for 1886. By William Saunders. In Annual Report Commissioner of Agriculture for 1886. Pp. 687-703.

Report of Superintendent of Gardens and Grounds for 1887. By William Saunders. In Annual Report Commissioner of Agriculture for 1887. Pp. 673-690.

No report printed in 1888.

Report of the Superintendent of Gardens and Grounds for 1889. By William Saunders. In Annual Report Secretary of Agriculture for 1889. Pp. 111-134.

Report of the Superintendent of Gardens and Grounds for 1890. By William Saunders. Pp. i-ii, 557-596. 1891.

Reprinted from Annual Report Secretary of Agriculture for 1890.

Report of the Superintendent of Gardens and Grounds for 1891. By William Saunders. Pp. i-ii, 463-484, pls. 7. 1892.

Reprinted from Annual Report Secretary of Agriculture for 1891.

Report of the Superintendent of Gardens and Grounds for 1892. By William Saunders. Pp. i-iii, 377-402. 1893.

Reprinted from Annual Report Secretary of Agriculture for 1892.

Report of the Superintendent of Gardens and Grounds for 1893. By William Saunders. Pp. 365-388. 1894.

Reprinted from Annual Report Secretary of Agriculture for 1893.

Report of the Chief of the Division of Gardens and Grounds for 1894. By William Saunders. In Annual Report Secretary of Agriculture in Message and Documents for 1893-1894. Pp. 207, 208.

Report of the Chief of the Division of Gardens and Grounds for 1895. By William Saunders. In Annual Report Secretary of Agriculture in Message and Documents for 1895. Pp. 189-190.

No report printed in 1896.

Report of Superintendent of Experimental Gardens and Grounds for 1897. By William Saunders. In Annual Reports Department of Agriculture for 1897. Pp. 159-160.

Report of Superintendent of Experimental Gardens and Grounds for 1898. By William Saunders. In Annual Reports Department of Agriculture for 1898. Pp. 143-144.

Report of the Superintendent of Gardens and Grounds for 1898. By William Saunders. Pp. i-iii, 91-92. 1899.

Reprinted from Annual Reports Department of Agriculture for 1899.

Report of the Gardens and Grounds for 1900. By B. T. Galloway. Pp. i-ii, 273-278. 1900.

Reprinted from Annual Reports Department of Agriculture for 1900.

MISCELLANEOUS REPORTS.

Catalogue of the Plants, Bulbs, Tubers, etc., for Distribution from the U. S. Propagating Garden, with a Report on the Objects and Aims of the Garden. 1862. (See Report No. 2, Office of Secretary.)

Descriptive Catalogue of Plants in the Exotic Collection of the Department of Agriculture. 1872. (See Report No. 6, Office of Secretary.)

Thea Viridis, or Chinese Tea Plant, and the Practicability of Its Culture and Manufacture in the United States; also Some Remarks on the Cultivation of the Coffee Plant. 1877. (See Special Report No. 3, old series, Division of Statistics.)

Tea Culture as a Probable American Industry. 1879. (See Special Report No. 18, old series, Division of Statistics.)

Observations on the Soils and Products of Florida. 1883. (See Special Report No. 62, old series, Office of Secretary.)

Report on the Participation of the Department of Agriculture in the International Exhibition of 1876 at Philadelphia. By William Saunders. Pp. 223-434. 1884. (See Special Reports, unnumbered, Office of Secretary.)

Catalogue of Economic Plants in the Collection of the United States Department of Agriculture. 1891. (See Report No. 47, Office of Secretary.)

Papers on Horticultural and Kindred Subjects. 1891. (See Report No. 48, Office of Secretary.)

Special Report on Tea Raising in South Carolina. 1893. (See Special Reports, Office of Secretary.)

Cranberry Culture. 1894. (See Farmers' Bulletin No. 13, Office of Secretary.)

Irrigation for the Garden and Greenhouse. 1896. (See Separate No. 36, part 1, Office of Secretary.)

Experimental Gardens and Grounds. 1898. By William Saunders, Superintendent. (See Separate No. 113, Office of Secretary.)

Pruning Trees and Other Plants. 1899. By William Saunders, Horticulturist. (See Separate No. 145, Office of Secretary.)

Tea Culture: The Experiment in South Carolina. 1899. (See Report No. 61, Office of Secretary.)

Sweet Potatoes. 1901. (See Farmers' Bulletin No. 129, Office of Secretary.)

CIRCULARS.

No. 1. An Experiment in Tea Culture: A Report on the Tea Gardens of Dr. Charles U. Shepard, Pinehurst, S. C. By William Saunders, Horticulturist. Pp. 10. 1897.

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OFFICE OF IRRIGATION INQUIRY.

[This office was organized by act of Congress April 4, 1890, and abolished June 30, 1895, at which time the irrigation investigations of this Department were placed in charge of the Office of Experiment Stations.]

ANNUAL REPORTS.

Report of Special Agent in Charge of the Artesian and Underflow Investigations and of the Irrigation Inquiry for 1890. By Richard J. Hinton. Pp. 471-488, map 1. 1891.

Reprinted from Annual Report Secretary of Agriculture for 1890.

Report of the Special Agent in Charge of the Artesian and Underflow Investigations and of the Irrigation Inquiry for 1891. By Richard J. Hinton. Pp. 439-450, map 1. 1892.

Reprinted from Annual Report Secretary of Agriculture for 1891.

No report printed in 1892.

Report of the Special Agent in Charge of Irrigation Inquiry for 1893. By Charles W. Irish. In Annual Report Secretary of Agriculture for 1893. Pp. 593-594.

Report of the Chief of the Office of Irrigation Inquiry for 1894. By Charles W. Irish. In Annual Report Secretary of Agriculture in Message and Documents for 1893-1894. Pp. 219-220.

Report of the Chief of the Office of Irrigation Inquiry for 1895. By Charles W. Irish. In Annual Report Secretary of Agriculture in Message and Documents for 1895. Pp. 183-185.

MISCELLANEOUS REPORTS.

Artesian Wells upon the Great Plains; being the report of a geological commission appointed to examine a portion of the Great Plains east of the Rocky Mountains, and to report upon the localities deemed most favorable for making experimental borings. 1882. (See Report No. 19, Office of Secretary.)

Irrigation in the United States. A report prepared by Richard J. Hinton, under the direction of the Commissioner of Agriculture. Index. Pp. 240, ills. 1887.

Progress Report. In 2 parts.

Part I.—Irrigation in the United States. By Richard J. Hinton. Pp. 337, ills. 1891.

Part II.—Artesian and Underflow Investigation between the Ninety-seventh Degree of West Longitude and the Foothills of the Rocky Mountains, with maps and profiles. Prepared under the direction of the Secretary of Agriculture by Edwin S. Nettleton, C. E., Chief Engineer of Investigation. Index. Pp. 14. 1891. (Also in S. Doc. No. 53, 51st Congress, 2d session.)

Report on the Preliminary Investigation to Determine the Proper Location of Artesian Wells within the Area of the Ninety-seventh Meridian and east of the Foothills of the Rocky Mountains. Pp. 398, ills., and maps. 1891. (Also in S. Doc. No. 222, 51st Congress, 1st session.)

148 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

Report on Irrigation. In 4 parts. 1892.

Part I.—A Report on Irrigation and the Cultivation of the Soil thereby, with Physical Data, Conditions, and Progress within the United States for 1891, accompanied by maps, illustrations, and papers. By Richard J. Hinton, Special Agent in Charge, Office of Irrigation Inquiry, Department of Agriculture. Pp. 459. 1892.

Part II.—Artesian and Underflow Investigation. Final report of the Chief Engineer, Edwin S. Nettleton, C. E., to the Secretary of Agriculture, with accompanying maps, profiles, diagrams, and additional papers. Pp. 116. 1892.

Part III.—Final Geographical Reports of the Artesian and Underflow Investigation between the Ninety-seventh Meridian of Longitude and the Foothills of the Rocky Mountains to the Secretary of Agriculture. Made by Prof. Robert Hay, F. G. S. A., Chief Geologist, Office of Irrigation Inquiry, U. S. Department of Agriculture. Pp. 209, ills. 1892.

Part IV.—Final Report on the Mid-plains Division of the Artesian and Underflow Investigations between the Ninety-seventh Meridian of Longitude west of Greenwich and Foothills of the Rocky Mountains, by Special Agent J. W. Gregory, of Garden City, Kans.; and a Special Report on Certain Artesian Conditions in the State of South Dakota, by Fred. F. B. Coffin, Engineer for South Dakota. Pp. 61, ills. 1892. (Also in S. Doc. No. 41, 52d Congress, 1st session.)

Climate, Soil Characteristics, and Irrigation Methods of California. 1896. (See Separate No. 46, Office of Secretary.)

BULLETIN.

No. 1. Abstract of Laws of the Several States and Territories on Irrigation and Water Rights. Compiled by O. A. Critchett. Pp. 180. 1893.

LIBRARY.

ANNUAL REPORTS.

Report of the Librarian for 1894. By W. P. Cutter. In Annual Report Secretary of Agriculture, in Message and Documents for 1893-1894. P. 203.

No reports printed in 1895, 1896, and 1897.

Report of the Librarian for 1898. By W. P. Cutter. In Annual Reports Department of Agriculture for 1898. Pp. 167-168.

Report of the Librarian for 1899. By W. P. Cutter. Pp. i-iii, 213-214. 1899.

Reprinted from Annual Reports Department of Agriculture for 1899.

Report of the Librarian for 1900. By W. P. Cutter. Pp. i-ii, 111-112. 1900.

Reprinted from Annual Reports Department of Agriculture for 1900.

MISCELLANEOUS REPORT.

The Library. 1898. (See Separate No. 114, Office of Secretary.)

BULLETINS.

No. 1. Accessions to the Department Library. Pp. 12. 1894.

No. 2. Periodicals and Society Publications Currently Received at the Department Library. Pp. 8. 1894.

No. 3. Accessions to the Department Library, April-June, 1894. Pp. 11. 1894.

No. 4. Accessions to the Department Library, July-October, 1894. Pp. 9. 1894.

No. 5. Accessions to the Department Library, November-December, 1894. Pp. 7. 1895.

No. 6. Accessions to the Department Library, January-March, 1895. Pp. 12. 1895.

No. 7. Accessions to the Department Library, April-June, 1895. Pp. 11. 1895.

No. 8. Accessions to the Department Library, July-September, 1895. Pp. 11. 1895.

No. 9. List of Publications of the U. S. Department of Agriculture from 1841 to June 30, 1895, inclusive. Pp. 76. 1896.

No. 10. Accessions to the Department Library, October-December, 1895. Pp. 14. 1896.

No. 11. Accessions to the Department Library, January-March, 1896. Pp. 15. 1896.

No. 12. Accessions to the Department Library, April-June, 1896. Pp. 14. 1896.

No. 13. Accessions to the Department Library, July-September, 1896. Pp. 10. 1896.

No. 14. Accessions to the Department Library, October-December, 1896. Pp. 13. 1897.

No. 15. Accessions to the Department Library, January-March, 1897. Pp. 15. 1897.

150 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

- No. 16. References to the Literature of the Sugar-Beet, Exclusive of Works in Foreign Languages. Compiled by Claribel R. Barnett. Pp. 9. 1897.
- No. 17. Accessions to the Department Library, April-June, 1897. Pp. 26. 1897.
- No. 18. A Bibliography of Poultry. Compiled by Emma B. Hawks, Cataloguer, under the direction of the Librarian. Index. Pp. 32. 1897.
- No. 19. Accessions to the Department Library, July-September, 1897. Pp. 25. 1897.
- No. 20. Reference List of Publications relating to Edible and Poisonous Mushrooms. Compiled by Josephine A. Clark, Assistant Librarian, under the direction of the Librarian. Pp. 16. 1898.
- No. 21. Accessions to the Department Library, October-December, 1897. Pp. 23. 1898.
- No. 22. Accessions to the Department Library, January-March, 1898. Pp. 38. 1898.
- No. 23. Accessions to the Department Library, April-June, 1898. Pp. 25. 1898.
- No. 24. List of publications relating to Forestry in the Department Library. Prepared under the direction of the Librarian. Index. Pp. 93. 1898.
- No. 25. Accessions to the Department Library, July-September, 1898. Pp. 16. 1898.
- No. 26. Accessions to the Department Library, October-December, 1898. Pp. 24. 1898.
- No. 27. Accessions to the Department Library, January-March, 1899. Pp. 20. 1899.
- No. 28. Accessions to the Department Library, April-June, 1899. Pp. 23. 1899.
- No. 29. Accessions to the Department Library, July-September, 1899. Pp. 21. 1899.
- No. 30. Accessions to the Department Library, October-December, 1899. Pp. 23. 1900.
- No. 31. Accessions to the Department Library, January-March, 1900. Pp. 25. 1900.
- No. 32. Accessions to the Department Library, April-June, 1900. Pp. 23. 1900.
- No. 33. Accessions to the Department Library, July-September, 1900. Pp. 19. 1900.
- No. 34. Accessions to the Department Library, October-December, 1900. Pp. 28. 1901.
- No. 35. Accessions to the Department Library, January-March, 1901. Pp. 29. 1901.

DIVISION OF MICROSCOPY.

[The first report of the Division of Microscopy was for 1885, and former reports on the work of the office appeared as articles in the Annual Reports of the Commissioner of Agriculture. The Division was abolished in 1895.]

ANNUAL REPORTS.

Report of the Microscopist for 1885. By Thomas Taylor, M. D. In Annual Report Commissioner of Agriculture for 1885. Pp. 89-158, Pls. I, II.

Report of the Microscopist for 1886. By Thomas Taylor. In Annual Report Commissioner of Agriculture for 1886. Pp. 139-147, Pls. I-VI.

Report of the Microscopist for 1887. By Thomas Taylor. In Annual Report Commissioner of Agriculture for 1887. Pp. 617-625, Pls. I-IV and VII.

Report of the Microscopist for 1888. By Thomas Taylor. In Annual Report Commissioner of Agriculture for 1888. Pp. 559-564, Pls. I-IX, figs. 2.

Report of the Microscopist for 1889. By Thomas Taylor. Pp. 191-200, Pls. I-VIII, I-V. 1890.

Reprinted from Annual Report Secretary of Agriculture for 1889.

Report of the Microscopist for 1890. By Thomas Taylor. Pp. 361-374, Pls. I-XI. 1891.

Reprinted from Annual Report Secretary of Agriculture for 1890.

Report of the Microscopist for 1891. By Thomas Taylor, M. D. Pp. 405-416, Pls. I-IX. 1892.

Reprinted from Annual Report Secretary of Agriculture for 1891.

Report of the Microscopist for 1892. By Thomas Taylor, M. D. Pp. 281-292, Pls. I-IX. 1893.

Reprinted from Annual Report Secretary of Agriculture for 1892.

Report of the Chief of the Division of Microscopy for 1893. By Thomas Taylor, M. D. Pp. i-iii, 297-302, Pls. I-VII. 1894.

Reprinted from Annual Report Secretary of Agriculture for 1893.

Report of the Chief of the Division of Microscopy for 1894. By Thomas Taylor. In Annual Report Secretary of Agriculture in Message and Documents for 1893-1894. Pp. 195-196.

SPECIAL REPORTS.

Letter to Dr. Thomas Taylor on the Work of His Microtome. By C. P. Lyman. 1881.

Fibrine and Bacteria. By Thomas Taylor. Pp. 5. n. d.

Naphthaline as an Insecticide, etc.: Its Effect on Seeds, Plants, and Animals. By Thomas Taylor. Pp. 6. 1883.

Microscopic Observations on Internal Parasites in Domestic Fowls, and Butter and Fats. 1884. (See Report No. 34, Office of Secretary.)

152 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

FOOD PRODUCTS.

- I. Twelve Edible Mushrooms of the United States, Illustrated with Twelve Colored Types. How to Select and Prepare for the Table. By Thomas Taylor, Chief of the Division of Microscopy. (Reprinted from Annual Report of Commissioner of Agriculture for 1885.) Pp. 16. 1890.
Revised edition, pp. 20, 1893.
Revised edition, pp. 23, 1894.
- II. Eight Edible and Twelve Poisonous Mushrooms of the United States, with Directions for the Culture and Culinary Preparation of the Edible Species. By Thomas Taylor, M. D., Chief of the Division of Microscopy. (A reprint of "Mushrooms of the United States," from the Annual Report of the Secretary of Agriculture for 1890. Pp. 365-374. With a brief appendix: List of the Edible Fungi of the United States.) Pp. 16, pls. 5. 1891.
Revised edition, pp. 23, frontispiece, 1893.
- III. (1) Improved Methods of Distinguishing Between Pure and Fictitious Lard.
(2) Four Edible Mushrooms of the United States. (Reprinted, with Revision, from the Report of the Secretary of Agriculture for 1891.) By Thomas Taylor, M. D., Chief of the Division of Microscopy. Pp. 22, pls. 6. 1893.

DIVISION OF POMOLOGY.

[The Division of Pomology was established in 1886, with H. E. Van Deman as Chief. The Annual Reports of the Chief are bound with those of the Secretary of Agriculture, and for some years have been published in independent form.]

ANNUAL REPORTS.

Report of the Pomologist for 1886. By H. E. Van Deman. In Annual Report Commissioner of Agriculture for 1886. Pp. 259-276, Pls. I-X.

Report of the Pomologist for 1887. By H. E. Van Deman. In Annual Report Commissioner of Agriculture for 1887. Pp. 627-652, Pls. I-IX.

Report of the Pomologist for 1888. By H. E. Van Deman. In Annual Report Commissioner of Agriculture for 1888. Pp. 565-595, Pls. I-X.

Report of the Pomologist for 1889. By H. E. Van Deman. Pp. 433-452, pls. 10. 1890.
Reprinted from Annual Report Secretary of Agriculture for 1889.

Report of the Pomologist for 1890. By H. E. Van Deman. Pp. 409-424, pls. 9. 1891.
Reprinted from Annual Report Secretary of Agriculture for 1890.

Report of the Pomologist for 1891. By H. E. Van Deman. Pp. 379-404, pls. 11. 1892.
Reprinted from Annual Report Secretary of Agriculture for 1891.

Report of the Pomologist for 1892. By H. E. Van Deman. Pp. 247-280, pls. 13, figs. 2. 1893.
Reprinted from Annual Report Secretary of Agriculture for 1892.

Report of the Pomologist for 1893. By W. A. Taylor, Assistant Pomologist. Pp. i-iii, 277-296, pls. 9. 1894.
Reprinted from Annual Report Secretary of Agriculture for 1894.

Report of the Pomologist for 1894. By S. B. Heiges. In Annual Report Secretary of Agriculture in Message and Documents for 1893-1894. Pp. 205-206.

Report of the Pomologist for 1895. By S. B. Heiges. In Annual Report Secretary of Agriculture in Message and Documents for 1895. Pp. 191-194.

Report of the Pomologist for 1896. By S. B. Heiges. Pp. i-iii, 109-114. 1896.
Reprinted from Annual Report Secretary of Agriculture in Message and Documents for 1896.

Report of the Pomologist for 1897. By G. B. Brackett. Pp. i-ii, 147-151. 1897.
Reprinted from Annual Reports Department of Agriculture for 1897.

Report of the Pomologist for 1898. By G. B. Brackett. Pp. i-iii, 127-131. 1898.
Reprinted from Annual Reports Department of Agriculture for 1898.

Report of the Pomologist for 1899. By G. B. Brackett. Pp. i-iii, 85-90. 1899.
Reprinted from Annual Reports Department of Agriculture for 1899.

Report of the Pomologist for 1900. By William A. Taylor, Acting Pomologist. Pp. i-ii, 59-63. 1900.
Reprinted from Annual Reports Department of Agriculture for 1900.

REPORTS OF THE POMOLOGIST.

[This series is a continuation of the Pomologist's Reports in the Annual Reports of the Secretary of Agriculture prior to 1894.]

Report of the Pomologist for 1894. By Samuel B. Heiges. Pp. 62, pls. 4, figs. 5. 1895.

Report of the Pomologist for 1895. By Samuel B. Heiges. Pp. 64, pls. 6. 1897. (Discontinued.)

MISCELLANEOUS REPORTS.

Cultivation of the Fig, and the Method of Preparing the Fruit for Commerce; also Report on the Importance of the Cultivation of the Palm. 1878. (See Special Report No. 4, old series, Division of Statistics.)

Culture of the Date. 1883. (See Report No. 24, Office of Secretary.)

Fruit Crop Prospects in the United States. Pp. 251-253. 1894. Reprinted from Statistical Report No. 115, new series.

Cranberry Culture. 1894. (See Farmers' Bulletin No. 13, Office of Secretary.)

Peach Growing for Market. 1895. (See Farmers' Bulletin No. 33, Office of Secretary.)

Sketch of the relationship between American and Eastern Asian Fruits. 1895. (See Separate No. 21, Office of Secretary.)

Nut Culture in the United States, embracing Native and Introduced Species. By W. P. Corsa, of the Division of Pomology. Pp. 144, pls. 16 (2 colored), figs. 2. 1896.

Small-fruit Culture for Market. 1896. (See Separate No. 47, Office of Secretary.)

The Improvement of Our Native Fruits. 1897. (See Separate No. 77, Office of Secretary.)

Pruning and Training of Grapes. 1897. (See Separate No. 87, Office of Secretary.)

Division of Pomology. 1898. (See Separate No. 115, Office of Secretary.)

The Fruit Industry and Substitution of Domestic for Foreign-Grown Fruits. 1898. (See Separate No. 116, Office of Secretary.)

Utilizing Surplus Fruits. 1899. (See Separate No. 146, Office of Secretary.)

The Present Condition of Grape Culture in California. 1899. (See Separate No. 147, Office of Secretary.)

The Apple and How to Grow It. 1900. (See Farmers' Bulletin No. 113, Office of Secretary.)

Grape Growing in the South. 1900. (See Farmers' Bulletin No. 118, Office of Secretary.)

Smyrna Fig Culture in the United States. 1901. (See Separate No. 196, Office of Secretary.)

Commercial Pear Culture. 1901. (See Separate No. 215, Office of Secretary.)

The Influence of Refrigeration on the Fruit Industry. 1901. (See Separate No. 222, Office of Secretary.)

BULLETINS.

No. 1. Report on the Condition of Tropical and Semi-Tropical Fruits in the United States in 1887. Prepared under the direction of the Commissioner of Agriculture.—Tropical and Semi-Tropical Fruits in Florida and the Gulf States, By P. W. Reasoner.—Tropical and Semi-Tropical Fruits of California, Arizona, and New Mexico. By W. G. Klee. Index. Pp. 149, pls. 3. 1888.

No. 2. Report on the Adaptation of Russian and Other Fruits to the Extreme Northern Portions of the United States. By T. T. Lyon. Index. Pp. 64. 1888.

No. 3. Classification and Generic Synopsis of the Wild Grapes of North America. By T. V. Munson. Pp. 14. 1890.

No. 4. Report on the Relative Merit of Various Stocks for the Orange, with Notes on Mal di Goma and the Mutual Influence of Stock and Scion. By W. R. King. Pp. 21. 1891.

No. 5. Fig Culture, Edible Figs: Their Culture and Curing. By Gustav Eisen, Curator in Biology, California Academy of Sciences, San Francisco, Cal.—Fig Culture in the Gulf States. By Frank S. Earle, Horticulturist, Alabama Experiment Station, Auburn, Ala. Pp. 32. 1897.

No. 6. Catalogue of Fruits Recommended for Cultivation in the Various Sections of the United States by the American Pomological Society. Revised by a Committee of the Society, T. T. Lyon, Chairman. Pp. 39, map 1. 1897.

No. 7. The Fruit Industry and Substitution of Domestic for Foreign-Grown Fruits, with Historical and Descriptive Notes on Ten Varieties of Apples Suitable for the Export Trade. By William A. Taylor, Assistant Pomologist. Pp. i-vii, 305-362, Pls. III-VII. 1898.
Reprint from Yearbook for 1897, with additional matter.

No. 8. Revised Catalogue of Fruits Recommended for Cultivation in the Various Sections of the United States and the British Provinces, by the American Pomological Society. Revised by a Committee of the Society, W. H. Ragan, Chairman. Pp. 63, pl. 1. 1899.

No. 9. The Fig: Its History, Culture, and Curing, with a Descriptive Catalogue of the Known Varieties of Figs. By Gustav Eisen, Ph. D. Pp. 317, frontispiece, pls. 15, figs. 93. 1901.

No. 10. Prunes and Prune Culture in Western Europe, With Special Reference to Existing Conditions in the Pacific Northwest. By Edward R. Lake, Professor of Botany and Horticulture, Oregon State Agricultural College. Pp. 23. pls. 10. 1901.

CIRCULARS.

No. 1. Nut Culture. By H. M. Engle. With additional note by S. B. Heiges, Pomologist. Pp. 4. 1896.

No. 2. Prune Culture in the Pacific Northwest. By E. R. Lake. Pp. 7, figs. 3. 1896. Revised edition, 1897.

No. 3. Notes on Peach Culture. By J. H. Hale. Pp. 8, figs. 4. 1897.

DIVISION OF PUBLICATIONS (FORMERLY DIVISION OF RECORDS AND EDITING).

[The organization of this division dates from the act of appropriation of July 14, 1890. Geo. Wm. Hill was appointed Chief. In July, 1895, the name of the division was changed from Division of Records and Editing to Division of Publications. In 1899 the title of Chief of Division was changed to Editor and Chief of Division of Publications. The Annual Reports of the Chief of the Division are bound with those of the Secretary of Agriculture, and are also issued in an independent form known as author's editions.]

ANNUAL REPORTS.

Report of the Chief of the Division of Records and Editing for 1890. By Geo. Wm. Hill. Pp. 437-447. 1891.

Reprinted from Annual Report Secretary of Agriculture for 1890.

Report of the Chief of the Division of Records and Editing for 1891. By Geo. Wm. Hill. Pp. 489-498. 1892.

Reprinted from Annual Report Secretary of Agriculture for 1891.

Report of the Chief of the Division of Records and Editing for 1892. By Geo. Wm. Hill. Pp. 497-508. 1893.

Reprinted from Annual Report Secretary of Agriculture for 1892.

Report of the Chief of the Division of Records and Editing for 1893. By Geo. Wm. Hill. Pp. i-iii, 395-403. 1894.

Reprinted from Annual Report Secretary of Agriculture for 1893.

Report of the Chief of the Division of Records and Editing for 1894. By Geo. Wm. Hill. Pp. i-iii, 171-184. 1895.

Reprinted from Annual Report Secretary of Agriculture in Message and Documents for 1893-1894.

Report of the Chief of the Division of Publications for 1895. By Geo. Wm. Hill. Pp. i-iii, 221-244. 1895.

Reprinted from Annual Report Secretary of Agriculture in Message and Documents for 1895.

Report of the Chief of the Division of Publications for 1896. By Geo. Wm. Hill. Pp. i-iii, 29-76. 1896.

Reprinted from Annual Report Secretary of Agriculture in Message and Documents for 1893.

Report of the Chief of the Division of Publications for 1897. By Geo. Wm. Hill. Pp. i-iii, 25-91. 1897.

Reprinted from Annual Reports Department of Agriculture for 1897.

Report of the Chief of the Division of Publications for 1898. By Geo. Wm. Hill. Pp. i-iv, 43-86. 1898.

Reprinted from Annual Reports Department of Agriculture for 1898.

Report of the Editor for 1899. By Geo. Wm. Hill. Pp. i-iv, 161-211. 1899.

Reprinted from Annual Reports Department of Agriculture for 1899.

Report of the Editor for 1900. By Geo. Wm. Hill. Pp. i-iii, 113-164. 1900.

Reprinted from Annual Reports Department of Agriculture for 1900.

DOCUMENT AND FOLDING ROOM.

[Since October, 1896, this office has been a section of the Division of Publications.]

ANNUAL REPORTS.

Report of the Superintendent of the Document and Folding Room for 1890. By A. T. Longley. In Annual Report Secretary of Agriculture for 1890. Pp. 449-450.

158 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

Report of the Superintendent of the Document and Folding Room for 1891. By A. T. Longley. In Annual Report Secretary of Agriculture for 1891. Pp. 499-501.

Report of the Superintendent of the Document and Folding Room for 1892. By A. T. Longley. In Annual Report Secretary of Agriculture for 1892. Pp. 509-512.

Report of the Superintendent of the Document and Folding Room for 1893. By Will H. Bane. In Annual Report Secretary of Agriculture for 1893. Pp. 409-410.

Report of the Superintendent of the Document and Folding Room for 1894. By Will H. Bane. In Annual Report Secretary of Agriculture in Message and Documents for 1893-1894. P. 215.

No report issued for 1895.

DIVISION OF ILLUSTRATIONS.

[This division was established July 14, 1890, with George Marx as Chief, and was abolished June 30, 1894.]

ANNUAL REPORTS.

Report of the Chief of the Division of Illustrations for 1890. By George Marx. In Annual Report Secretary of Agriculture for 1891. Pp. 435, 436.

Report of the Chief of the Division of Illustrations for 1891. By George Marx. In Annual Report Secretary of Agriculture for 1891. Pp. 485-487.

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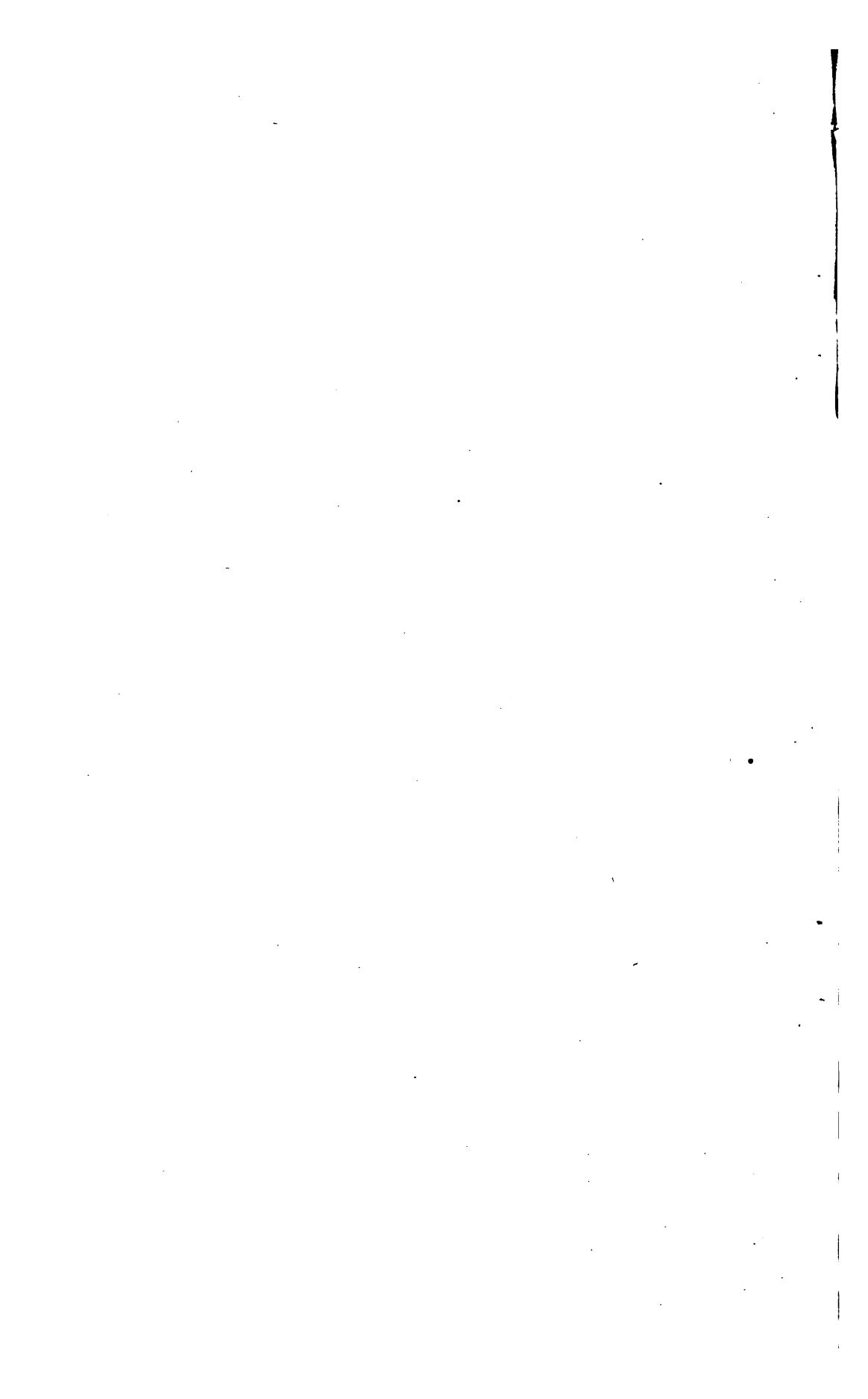
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OFFICE OF ROAD INQUIRY.

[These reports, the first of which was made in 1893, by Roy Stone, Special Agent and Engineer, are included in the Annual Reports of the Secretary of Agriculture, and are also printed separately in pamphlet form.]

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Cooperative Road Construction. 1896. (See Separate No. 40, Office of Secretary.)

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Steel-Track Wagon Roads. 1899. (See Separate No. 149, Office of Secretary.)

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No. 2. Proceedings of the Minnesota Good Roads Convention, held at St. Paul, Minn., Jan. 25, 26, 1894. Pp. 16. 1894.

No. 3. Improvement of the Road System of Georgia. By O. H. Sheffield, C. E., University of Georgia. Pp. 31, figs. 5. 1894.

No. 4. Report on Road-Making Materials in Arkansas. By John C. Branner, Arkansas State Geologist. Pp. 11. 1894.

No. 5. Information Regarding Road Materials and Transportation Rates in Certain States West of the Mississippi River. Pp. 24. 1894.

No. 6. Information Regarding Roads, Road Materials, and Freight Rates in Certain States North of the Ohio River. (Furnished by officials of various railway companies.) Pp. 30. 1894.

No. 7. Information Regarding Roads and Road-Making Materials in Certain Eastern and Southern States. (Furnished by officials of the various railway companies.) Pp. 29. 1894.

No. 8. Earth Roads: Hints on Their Construction and Repair. Compiled by Roy Stone, Special Agent in Charge of Road Inquiry. Pp. 20, figs. 11. 1894.

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No. 10. Proceedings of the National Road Conference, held at Asbury Park, N. J., July 5-6, 1894. Pp. 63, figs. 3. 1894.

No. 11. Proceedings of the Virginia Good Roads Convention, held in Richmond, Va., Oct. 18, 1894. Pp. 62, fig. 1. 1895.

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No. 13. Kentucky Highways: History of the Old and New Systems. By M. H. Crump, C. E. Pp. 24. 1895.

No. 14. Good Roads: Extracts from Messages of Governors. Compiled by Roy Stone, Special Agent and Engineer. Pp. 24. 1895.

No. 15. Proceedings of the Good Roads Convention of Texas, held at Turner's Hall, in Houston, Tex., Feb. 19, 1895. Pp. 24. 1895.

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No. 18. State Laws Relating to the Management of Roads. Enacted in 1894-1895. Compiled by Roy Stone, Special Agent and Engineer. Pp. 86. 1895.

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No. 18. Report of Committee on Legislation Adopted by the State Good-Roads Convention, held in Richmond, Va., Oct. 10 and 11, 1895. Pp. 6. 1895.

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No. 21. Methods of Constructing Macadamized Roads. Pp. 12. 1896.

No. 22. Tennessee Road Circular. Pp. 3. 1896.

No. 23. Money Value of Good Roads to Farmers. By W. C. Latta, Purdue University of Indiana. Pp. 4. 1896.

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No. 31. Must the Farmer Pay for Good Roads? By Otto Dorner, Milwaukee, Wis., Chairman National Committee for Highway Improvement, League of American Wheelmen. Pp. 40, pls. 35, figs. 15. 1898.

No. 32. State Aid to Road Building in Minnesota. By A. B. Choate. Pp. 12, pls. 4, figs. 4, 1898.

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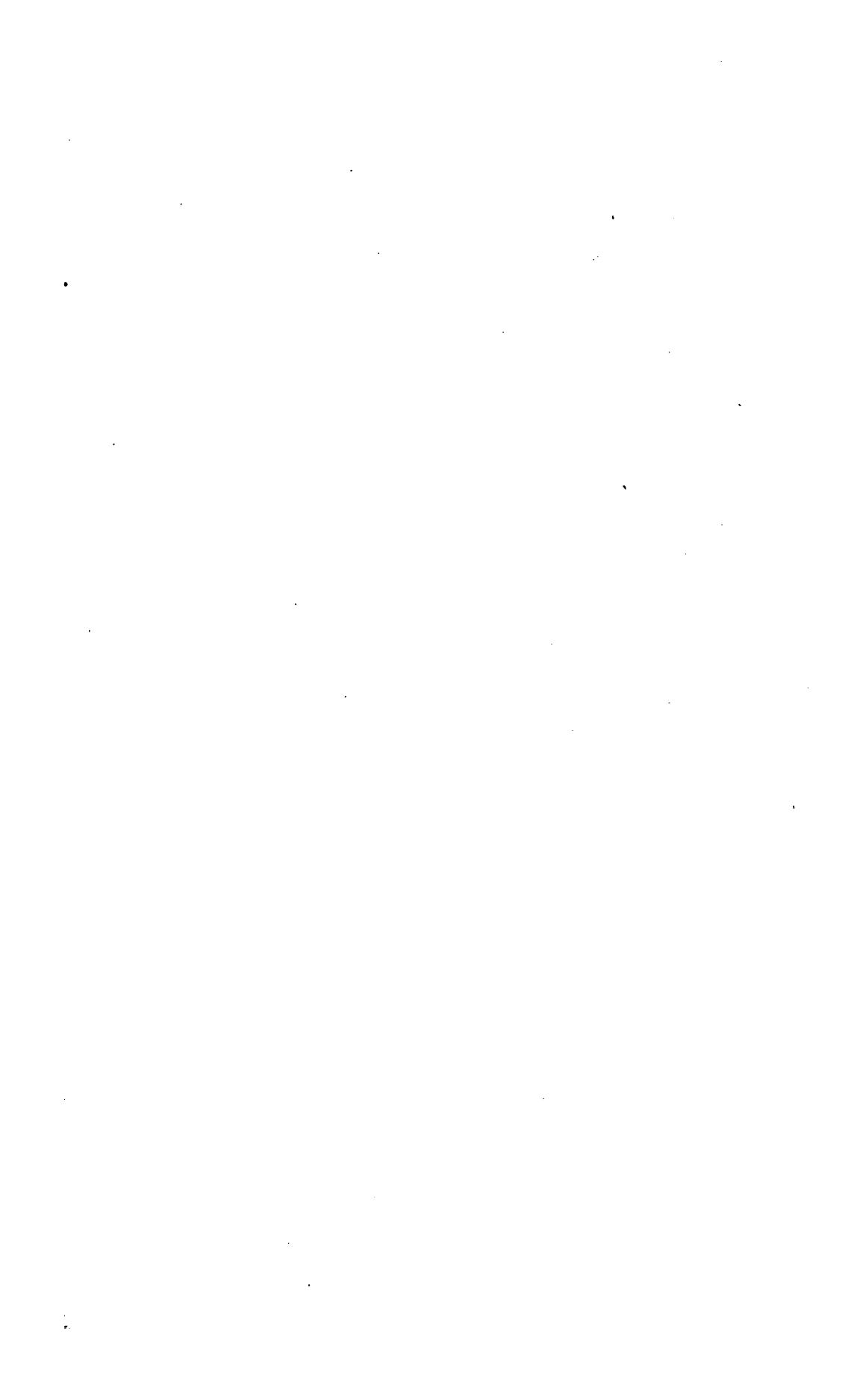
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DIVISION OF SOILS.

[This division was established as a part of the Weather Bureau, Feb. 15, 1894, and became an independent office under the title "Division of Agricultural Soils," July 1, 1895.]

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No. 6. An Electrical Method of Determining the Moisture Content of Arable Soils. By Milton Whitney, Frank D. Gardner, and Lyman J. Briggs. Pp. 26, figs. 6. 1897.

No. 7. An Electrical Method of Determining the Temperature of Soils. By Milton Whitney and Lyman J. Briggs. Pp. 15, fig. 1. 1897.

No. 8. An Electrical Method of Determining the Soluble Salt Content of Soils, with Some Results of Investigations on the Effect of Water and Soluble Salts on the Electrical Resistance of Soils. By Milton Whitney and Thomas H. Means. Pp. 30, figs. 6. 1897.

No. 9. Soil Moisture. A Record of the Amount of Water Contained in Soils during the Crop Season of 1896. By Milton Whitney and Ralph S. Hosmer. Pp. 23, diagrams 12. 1897.

No. 10. The Mechanics of Soil Moisture. By Lyman J. Briggs, Physicist, Division of Soils. Pp. 24, figs. 7. 1897.

No. 11. Tobacco Soils of the United States: A Preliminary Report upon the Soils of the Principal Tobacco Districts. By Milton Whitney, Chief of Division of Soils. Pp. 47, pls. 13. 1898.

No. 12. The Electrical Method of Moisture Determination in Soils: Results and Modifications in 1897. By Frank D. Gardner, Assistant, Division of Soils. Pp. 24, pls. 3, figs. 2. 1898.

No. 13. A Preliminary Report on the Soils of Florida. By Milton Whitney, Chief of Division of Soils. Pp. 31, pls. 6, figs. 3. 1898.

No. 14. The Alkali Soils of the Yellowstone Valley, from a Preliminary Investigation of the Soils near Billings, Mont. By Milton Whitney and Thos. H. Means. Pp. 39, pls. 17, figs. 3. 1898.

No. 15. Electrical Instruments for Determining the Moisture, Temperature, and Soluble Salt Content of Soils. By Lyman J. Briggs, Assistant Chief, Division of Soils. Pp. 35, figs. 12. 1899.

No. 16. Catalogue of the First Four Thousand Samples in the Soil Collection of the Division of Soils. By Milton Whitney, Chief of Division of Soils. Pp. 145. 1899.

No. 17. Soil Solutions: Their Nature and Functions, and the Classification of Alkali Lands. By Frank K. Cameron, Soil Chemist, Division of Soils. [Cooperating with the Division of Chemistry.] Pp. 39. 1901.

CIRCULARS.

No. 1. Announcement of the Functions of the Division. Pp. 3. 1894.

No. 2. Instructions for Taking Samples of Soil for Moisture Determinations. Pp. 3. 1894.

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No. 3. The Soils of the Pecos Valley, New Mexico. By Thos. H. Means and Frank D. Gardner, Assistants, Division of Soils. Pp. 7. 1899.

No. 4. The Soils of Salt Lake Valley, Utah. By Frank D. Gardner, Assistant, Division of Soils, and John Stewart, Assistant Chemist, Utah Experiment Station. Pp. 11, fig. 1. 1900.

No. 5. Bulk Fermentation of Connecticut Tobacco. By Marcus L. Floyd, Tobacco Expert, Division of Soils. Pp. 9. 1900.

No. 6. Instructions for Determining in the Field the Salt Content of Alkali Waters and Soils. Pp. 7. 1900.

No. 7. Description of a Soil Map of the Connecticut Valley. By Milton Whitney, Chief of Division. Pp. 4. 1900.

DIVISION OF STATISTICS.

[The Division of Statistics was organized in 1863, with Lewis Bollman as Statistician. The annual reports of this division are bound with those of the Commissioner or Secretary, and for some years have been bound in separate form.]

ANNUAL REPORTS

Report of Agricultural Statistics for 1863. By Lewis Bollman, Statistician. In Annual Report Commissioner of Agriculture for 1863. Pp. 579-621.

Report of Agricultural Statistics for 1864. By Lewis Bollman, Statistician. In Annual Report Commissioner of Agriculture for 1864. Pp. 564-605.

Report of the Statistician for 1865. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1865. Pp. 54-87.

Report of the Statistician for 1866. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1866. Pp. 51-96.

Report of the Statistician for 1867. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1867. Pp. 77-128.

Report of the Statistician for 1868. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1868. Pp. 16-58.

Report of the Statistician for 1869. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1869. Pp. 20-59.

Report of the Statistician for 1870. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1870. Pp. 24-64.

Report of the Statistician for 1871. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1871. Pp. 13-68, Pls. II, III.

Report of the Statistician for 1872. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1872. Pp. 9-112, Pls. I-III.

Report of the Statistician for 1873. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1873. Pp. 15-151.

Report of the Statistician for 1874. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1874. Pp. 15-121.

Report of the Statistician for 1875. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1875. Pp. 17-114, Pls. II-IX.

Report of the Statistician for 1876. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1876. Pp. 87-262.

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Report of the Statistician for 1878. By Charles Worthington. In Annual Report Commissioner of Agriculture for 1878. Pp. 257-320, Diagrams I-III.

Report of the Statistician for 1879. By Charles Worthington. In Annual Report Commissioner of Agriculture for 1879. Pp. 127-185.

Report of the Statistician for 1880. By Charles Worthington. In Annual Report Commissioner of Agriculture for 1880. Pp. 185-233.

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Report of the Statistician for 1881-1882. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1881-1882. Pp. 577-676, Pls. I-VI.

Report of the Statistician for 1883. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1883. Pp. 251-423, Diagrams A-H.

Report of the Statistician for 1884. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1884. Pp. 419-565, Diagrams I-XXVII.

Report of the Statistician for 1885. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1885. Pp. 345-430, Pls. I-VI.

Report of the Statistician for 1886. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1886. Pp. 359-458.

Report of the Statistician for 1887. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1887. Pp. 523-604, Diagrams A-H.

Report of the Statistician for 1888. By J. R. Dodge. In Annual Report Commissioner of Agriculture for 1888. Pp. 405-476.

Report of the Statistician for 1889. By J. R. Dodge. Pp. 201-272. 1890.
Reprinted from Annual Report Secretary of Agriculture for 1889.

Report of the Statistician for 1890. By J. R. Dodge. Pp. 287-360, maps 3. 1891.
Reprinted from Annual Report Secretary of Agriculture for 1890.

Report of the Statistician for 1891. By J. R. Dodge. Pp. 273-340. 1892.
Reprinted from Annual Report Secretary of Agriculture for 1891.

Report of the Statistician for 1892. By J. R. Dodge, M. A. Index. Pp. i-iii, 403-470, i-ii. 1893.
Reprinted from Annual Report Secretary of Agriculture for 1892.

Report of the Statistician for 1893. By Henry A. Robinson. Index. Pp. i-iii, 465-566, i-iv. 1894.
Reprinted from Annual Report Secretary of Agriculture for 1893.

Report of the Statistician for 1894. By Henry A. Robinson. In Annual Report Secretary of Agriculture in Message and Documents for 1893-1894. Pp. 113-122.

Report of the Statistician for 1895. By Henry A. Robinson. Pp. i-iii, 111-129. 1895.
Reprinted from Annual Report Secretary of Agriculture in Message and Documents for 1895.

Report of the Statistician for 1896. By Henry A. Robinson. Pp. i-iii, 115-122. 1896.
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Report of the Statistician for 1897. By John Hyde. Pp. i-ii, 219-224. 1897.
Reprinted from Annual Reports Department of Agriculture for 1897.

Report of the Statistician for 1898. By John Hyde. Pp. i-iii, 175-178. 1898.
Reprinted from Annual Reports Department of Agriculture for 1898.

Report of the Statistician for 1899. By John Hyde. Pp. i-iii, 263-266. 1899.
Reprinted from Annual Reports Department of Agriculture for 1899.

Report of the Statistician for 1900. By John Hyde. In Annual Reports Department of Agriculture for 1900. Pp. 293-297.

MISCELLANEOUS REPORTS.

Address of Hon. George B. Loring, Commissioner of Agriculture, and Other Proceedings of a Cotton Convention Held at Atlanta, Ga., Nov. 2, 1881. 1881. (See Report No. 17, Office of Secretary.)

Area and Product of Cereals Grown in 1879, as Returned by the Census of 1880. 1883. (See Report No. 23, Office of Secretary.)

Agricultural Graphics. 1885. (See Report No. 40, Office of Secretary.)

Album of Agricultural Statistics of the United States. Results of Investigation under Direction of the Statistician. By J. R. Dodge, Statistician. Size 9½ x 12½ inches. Pp. 8, col. charts 16. 1889.

Album of Agricultural Graphics. Value per Acre of Crops of the United States, based on Results of Official Statistical Investigation. By J. R. Dodge, Statistician. Size 12½ x 18½ inches. Pp. 6, col. maps 10. 1891.

Report on the Condition of Growing Crops. August, 1892. By J. R. Dodge, Statistician. Pp. 16. 1892.

Report on the Condition of Crops. September, 1892. By J. R. Dodge, Statistician. Pp. 20. 1892.

Report on the Condition of Crops and Yield of Grain per Acre. October, 1892. By J. R. Dodge, Statistician. Pp. 23. 1892.

Report on Yield of Crops per Acre and on Product compared with Last Year. November, 1892. By J. R. Dodge, Statistician. Pp. 16. 1892.

Report on the Crops of the Year. December, 1892. By J. R. Dodge, Statistician. Pp. 3-28. 1893.

Report on the Numbers and Values of Farm Animals, and on Cotton Distribution. Pp. 20. January-February, 1893. Pp. 20. 1893.

Report on Distribution and Consumption of Corn and Wheat. March, 1893. Pp. 16. 1893.

A Manual of Instructions to Crop Correspondents. By Henry A. Robinson, Statistician. Pp. 28. 1895.
Revised edition. Pp. 23. 1896.

Index to Reports of the Division of Statistics, U. S. Department of Agriculture, Nos. 134 to 144, 1896. Pp. 6. 1897.

Synoptical Index of the Reports of the Statistician, 1863-1894. 1897. (See Bulletin No. 2, Division of Publications.)

Agricultural Production and Prices. 1898. (See Separate No. 122, Office of Secretary.)

Public Domain of the United States. 1899. (See Separate No. 154, Office of Secretary.)

Keeping Goats for Profit. 1899. (See Separate No. 155, Office of Secretary.)

Agricultural Statistics Relating to Grain, Cotton, Sugar, Animals, etc., in the United States. 1899. (See Separate No. 156, Office of Secretary.)

Progress of Agriculture in the United States. 1900. (See Separate No. 179, Office of Secretary.)

Statistical Matter relating to Principal Crops and Farm Animals, Transportation Rates, etc., in the United States, 1900. 1901. (See Separate No. 200, Office of Secretary.)

Influence of Rye on the Price of Wheat. 1901. (See Separate No. 209, Office of Secretary.)

MONTHLY REPORTS (OLD SERIES).

[This series of publications was begun under Isaac Newton, Commissioner, and contains reports on the condition of the crops, on special subjects of interest to farmers, and meteorological observations received from the Smithsonian Institution, under the direction of Professor Henry. This series was discontinued in 1876, but it will be noticed that the Special Reports (old series) continue the reports on the conditions of crops, etc., beginning in 1877.]

Vol. 1. 1863-1864. n. t. p. Monthly reports, May-November, 1863; bimonthly reports, January-December, 1864; monthly reports, January-February, 1865.
 May-June, 1863, pp. 16; July, pp. 19; Aug., pp. 20; Sept., pp. 41; Oct., pp. 20; Nov., pp. 38; Jan.-Feb., 1864, pp. 72; Mar.-Apr., pp. 96; Apr.-May, pp. 38; June-July, pp. 28; Sept.-Oct., pp. 56; Nov.-Dec., pp. 59.
 In some volumes January and February, 1865, will be found bound with the reports of 1863-1864.

Vol. 2. 1865. n. t. p. Monthly reports, January-December, 1865.
 Jan., pp. 50; Feb., pp. 48; Mar., pp. 41; Apr.-May, pp. 86; June-July, pp. 60; Aug., pp. 54; Sept., pp. 51; Oct., pp. 46; Nov., pp. 53; Dec., pp. 43.

Vol. 3. Monthly report of the Department of Agriculture for the Year 1866. J. R. Dodge, editor. 1867.
 Jan., pp. 1-50; Feb., pp. 51-122; Mar., pp. 123-169; Apr., pp. 170-228; June, pp. 229-276; July, pp. 277-324; Sept., pp. 325-371; Oct., pp. 377-408; Nov.-Dec., pp. 412-457.

Vol. 4. Monthly report of the Department of Agriculture for the Year 1867. J. R. Dodge, editor. 1868. 397 pp.
 Jan., pp. 1-48; Feb., pp. 51-80; Mar., pp. 82-127; Apr., pp. 131-186; May-June, pp. 189-233; July, pp. 237-270; Aug.-Sept., pp. 278-311; Oct., pp. 315-352; Nov.-Dec., pp. 354-397.

Vol. 5. Monthly report of the Department of Agriculture for the Year 1868. Edited by J. R. Dodge, Statistician. 1868. 483 pp. Index.
 Jan., pp. 1-55; Feb., pp. 60-107; Mar., pp. 112-169; Apr., pp. 174-234; May-June, pp. 238-307; July, pp. 312-339; Aug.-Sept., pp. 344-383; Oct., pp. 388-420; Nov.-Dec., pp. 424-483.

Vol. 6. Monthly report of the Department of Agriculture for the Year 1869. Edited by J. R. Dodge, Statistician. 1869. 419 pp. Index.
 Jan., pp. 4-40; Feb., pp. 44-82; Mar.-Apr., pp. 86-185; May-June, pp. 190-262; July, pp. 266-314; Aug.-Sept., pp. 266-326; Oct., pp. 330-386; Nov.-Dec., pp. 380-419.
 In the printed volume there is an error in the pagination of the November-December number.

Vol. 7. Monthly report of the Department of Agriculture for the Year 1870. Edited by J. R. Dodge, Statistician. 1871. 498 pp. Index.
 Jan., pp. 4-64; Feb., pp. 68-110; Mar.-Apr., pp. 114-187; May-June, pp. 192-260; July, pp. 264-308; Aug.-Sept., pp. 314-385; Oct., pp. 390-454; Nov.-Dec., pp. 458-498.

Vol. 8. Monthly report of the Department of Agriculture for the Year 1871. 1872. 517 pp. Index.
 Jan., pp. 4-52; Feb., pp. 56-92; Mar.-Apr., pp. 96-168; May-June, pp. 172-230; July, pp. 234-391; Aug.-Sept., pp. 296-376; Oct., pp. 380-430; Nov.-Dec., pp. 434-517.

Vol. 9. Monthly report of the Department of Agriculture for the Year 1872. 1873. 528 pp. Index.
 Jan., pp. 4-48; Feb., pp. 52-102; Mar.-Apr., pp. 106-169; May-June, pp. 174-246; July, pp. 250-326; Aug.-Sept., pp. 330-409; Oct., pp. 414-465; Nov.-Dec., pp. 470-528.

Vol. 10. Monthly report of the Department of Agriculture for the Year 1873. 1873. 618 pp. Index.
 Jan., pp. 4-48; Feb., not issued; Mar., pp. 52-131; Apr., pp. 136-208; May-June, pp. 212-297; July, pp. 302-383; Aug.-Sept., pp. 388-463; Oct., pp. 468-518; Nov.-Dec., pp. 522-618.

Vol. 12. Monthly report of the Department of Agriculture for the Year 1875. 1876.
532 pp. Index.

Jan., pp. 4-63; Feb.-Mar., pp. 68-146; Apr., pp. 150-186; May-June, pp. 190-257; July, pp. 262-329; Aug.-Sept., pp. 334-411; Oct., pp. 416-471; Nov.-Dec., pp. 476-532.

Vol. 13. Monthly report of the Department of Agriculture for the Year 1876. 1877.
511 pp. Index.

Jan.-Feb., pp. 4-74; Mar.-Apr., pp. 78-129; May-June, pp. 134-214; July, pp. 218-291; Aug.-Sept., pp. 296-379; Oct., pp. 384-439; Nov.-Dec., pp. 444-511.

SPECIAL REPORTS (OLD SERIES).

(Also known as Special Reports, numbered.)

No. 1. Statement showing the Condition and Prospects of the Cane-Sugar Industry in the United States. Pp. 41. 1877. Also in Annual Report of the Commissioner of Agriculture for 1877. Pp. 23-47.

No. 2. Report upon the Condition of Crops. Also Statement of the International Wheat Supply and Our Own Wheat Exports, together with Foreign Crops and Prices. Pp. 35. 1877.

No. 3. Thea Viridis, or Chinese Tea Plant, and the Practicability of its Culture and Manufacture in the United States. Also Some Remarks on the Cultivation of the Coffee Plant. Pp. 26. 1877.

No. 4. Cultivation of the Fig, and the Method of Preparing the Fruit for Commerce. Also Report on the Importance of the Cultivation of the Date Palm. Pp. 17. 1878.

No. 5. Report upon the Condition of the Crops. June 1, 1878. Pp. 10. 1878.

No. 6. Report upon the Condition of the Crops. July 1, 1878. Pp. 17, 1878.

No. 7. Report upon the Condition of the Crops. Aug. 1, 1878. Pp. 26. 1878.

No. 8. Report upon the Condition of the Crops. Sept. 1, 1878. Pp. 22. 1878.

No. 9. Report upon the Condition of the Crops. Dec. 1, 1878. Pp. 28. 1878.

No. 10. Report upon the Condition of the Crops and Live Stock. Jan. 1879. Pp. 21. 1879.

No. 11. The Silkworm: Being a Brief Manual of Instructions for the Production of Silk. Pp. 31, figs. 8. 1879.

Passed through five editions bearing this number, and next appears as Entomology Bulletin No. 9, old series. (Sixth revised edition.)

No. 12. Investigations of Diseases of Swine, and Infectious and Contagious Diseases Incident to Other Classes of Domesticated Animals. Index. Pp. 292, col. pls., ills. 1879.

Continued in Nos. 22 and 34.

No. 13. Report upon the Condition of Crops and Live Stock. April, 1879. Pp. 26. 1879.

No. 14. Report upon the Condition of Crops. June 1, 1879. Pp. 22. 1879.

No. 15. Report upon the Condition of Crops. July 1, 1879. Pp. 24. 1879.

No. 16. Report upon the Condition of Crops. Aug. 1, 1879. Pp. 25. 1879.

No. 17. Report upon the Condition of Crops. Sept. 1, 1879. Pp. 25. 1879.

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No. 18. **Tea Culture as a Probable American Industry.** By William Saunders, Superintendent of Gardens and Grounds, Department of Agriculture. Read before the New York Horticultural Society, at its meeting in New York City, October 7, 1879. Pp. 21. 1879.

No. 19. **Report upon the Condition of Crops.** Nov. 1, 1879. Pp. 21. 1879.

No. 20. **Report upon the Condition of Crops.** Dec. 1, 1879. Pp. 15. 1879.

No. 21. **Report upon the Numbers and Prices of Farm Animals.** Jan. 1, 1880. Pp. 27. 1880.

No. 22. **Contagious Diseases of Domesticated Animals.** Continuation of Investigation by Department of Agriculture. Index. Pp. 268, col. pls., illus. 1880. Continued in No. 34.

No. 23. **Report upon the Condition of Crops and Live Stock.** April, 1880. Pp. 22. 1880.

No. 24. **Report upon the Condition of Crops.** June and July, 1880. Pp. 31. 1880.

No. 25. **Report upon the Condition of Crops.** August 1, 1880. Pp. 29. 1880.

No. 26. **Report on the Culture of Sumac in Sicily, and its Preparation for Market in Europe and the United States.** Prepared under the Direction of the Commissioner of Agriculture. By William McMurtrie, Ph. D. Pp. 32, pls. 8. 1880.

No. 27. **Report upon the Condition of Crops.** Sept. 1, 1880. Pp. 34. 1880.

No. 28. **Report on the Culture of the Sugar Beet and the Manufacture of Sugar therefrom in France and the United States.** Prepared under the direction of Hon. Wm. G. Le Duc, Commissioner of Agriculture. By Wm. McMurtrie, Ph. D., Superintendent of Agriculture in the United States Section, and Agent and Representative of the United States Department of Agriculture at the Paris Exposition of 1878. Index. Pp. 294, pls. 32, maps. 1880.

No. 29. **Report upon the Condition of Crops.** Nov. 1, 1880. Pp. 19. 1880.

No. 30. **Report upon the Condition of Crops.** Dec. 1, 1880. Pp. 19. 1880.

No. 31. **Contagious Pleuro-Pneumonia.** By Charles P. Lyman, F. R. C. V. S. Third Report. Pp. 20, col. pls. 1881.

No. 32. **Report upon the Condition of Crops and Live Stock.** April, 1881. Pp. 22. 1881.

No. 33. **Report of Analytical and Other Work done on Sorghum and Cornstalks, by the Chemical Division of the Department.** July to December, 1880. Under direction of Hon. W. G. Le Duc, Commissioner, by Peter Collier, Chemist. Pp. 101, pls. 37. 1881.

No. 34. **Contagious Diseases of Domesticated Animals.** Continuation of Investigation by Department of Agriculture. Index. Pp. 391, col. pls., illus. 1881.

No. 35. **Report on Insects Injurious to Sugar Cane.** Prepared under the direction of the Commissioner of Agriculture. By J. Henry Comstock, Entomologist. Pp. 11. 1881.

No. 36. **Report upon Statistics of Grape Culture and Wine Production in the United States for 1880.** Collected and compiled under the direction of Hon. Wm. G. Le Duc, Commissioner of Agriculture. By Wm. McMurtrie, Ph.D. Pp. 104. 1881.

No. 37. **Report upon the Condition of Crops.** June and July, 1881. Pp. 24. 1881.

No. 38. **Report upon the Condition of Crops.** Aug. 1, 1881. Pp. 21. 1881.

No. 39. Report upon the Condition of Crops. Sept. 1, 1881. Pp. 30. 1881.

No. 40. The Condition and Needs of Spring Wheat Culture in the Northwest. By Hon. C. C. Andrews, of Minnesota. Pp. 99. 1882.

No. 41. Report upon the Estimated Production of Cereals of the United States for the year 1881. Pp. 8. 1882.

No. 42. Report upon the Condition of Winter Grain, and upon Numbers and Condition of Farm Animals of the United States. April, 1882. Pp. 82. 1882.

No. 43. Report upon the Condition of Winter Grain, the Progress of Cotton and Corn Planting, the Rates of Wages and Labor, and Results of Tile Draining. May, 1882. Pp. 20. 1882.

No. 44. Report upon the Acreage and Condition of Cotton, the Condition of All Cereals, and the Area of Spring Grain, June, 1882. Pp. 15. 1882.

No. 45. Report upon the Area and Condition of Corn, the Condition of Cotton, and of Small Grains, Sorghum, Tobacco, etc., July, 1882. Pp. 33. 1882.

No. 46. Report upon the Condition of Corn and Cotton, of Spring Wheat, Fruits, etc.; also Freight Rates of Transportation Companies. August, 1882. Pp. 54. 1882.

No. 47. Climate, Soil, and Agricultural Capabilities of South Carolina and Georgia. By J. C. Hemphill Pp. 65. 1882.

No. 48. Silos and Ensilage. A Record of Practical Tests in Several States and Canada. Pp. 70. 1882.

No. 49. Report upon the Condition of Corn and Cotton, of Potatoes, Fruits, etc.; also Freight Rates of Transportation Companies. September, 1882. Pp. 48. 1882.

No. 50. The Dissemination of Texas Fever of Cattle and How to Control It. Pp. 14. 1882.

No. 51. Report upon the Yield and Quality of Small Grain, the Condition of Corn and Cotton, of Potatoes, Tobacco, etc.; also Freight Rates of Transportation Companies. October, 1882. Pp. 58. 1882.

No. 52. Report of Yield Per Acre of Cotton, Corn, Potatoes, and other Field Crops, with Comparative Product of Fruits; also Local Freight Rates of Transportation Companies. November, 1882. Pp. 109. 1882.

No. 53. Report upon the Product and Price of Principal Crops of 1882; also Freight Rates of Transportation Companies, including Changes of the Winter Tariff. December, 1882. Pp. 79. 1882.

No. 54. Address of Hon. Geo. B. Loring, U. S. Commissioner of Agriculture, before the Mississippi Valley Cane-Growers' Association, St. Louis, Mo., Dec. 14, 1882. Pp. 19. 1883.

No. 55. The Grange: Its Origin, Progress, and Educational Purposes. By Hon. D. Wyatt Aiken, of South Carolina. Read Before a convention called by the Commissioner of Agriculture, Jan. 23, 1883, to consider the subject of agricultural education. Pp. 18. 1883.

No. 56. Report upon the Numbers and Values of Farm Animals, of Product and Quality of Cotton, and Comparative Values of American and European Farm Implements; also Rates of Transportation in Europe and the United States. February, 1883. Pp. 74. 1883.

No. 57. Report on the Distribution and Consumption of Corn and Wheat, and the Rates of Transportation of Farm Products. March, 1883. Pp. 39. 1883.

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No. 58. Report on the Area and Condition of Winter Wheat, and the Condition of Farm Animals; also Spring Rates of Transportation of Farm Products. April, 1883. Pp. 46. 1883.

No. 59. Report of Condition of Winter Grain, the Progress of Cotton Planting, and Estimates of Cereals of 1882, with Freight Rates of Transportation Companies. May, 1883. Pp. 65. 1883.

No. 60. Report of Acreage of Spring Grain and Cotton, the Condition of Winter Wheat, and European Grain Prospects, with Freight Rates of Transportation Companies. June, 1883. Pp. 56. 1883.

No. 61. Report on the Area of Corn, Potatoes, and Tobacco, and the Condition of Growing Crops in the United States and Europe, with a Report on Rates of Transportation. July, 1883. Pp. 48. 1883.

No. 62. Observations on the Soils and Products of Florida. By William Saunders, Superintendent of Gardens and Grounds, etc. Pp. 30. 1883.

No. 63. The Grasses of the United States: Being a Synopsis of the Tribes and Genera, with Descriptions of the Genera, and a List of the Species. Prepared by Dr. Geo. Vasey, Botanist of the Department of Agriculture. Pp. 47. 1883.

No. 64. Report on the Condition of Crops, "American Competition," and Freight Rates of Transportation Companies. August, 1883. Pp. 80. 1883.

No. 65. Report on Condition of Crops, and on Freight Rates of Transportation Companies. September, 1883. Pp. 55. 1883.

(With this number this series was discontinued, but in October, 1883, it was resumed under the Division of Statistics as Statistical Monthly Reports, new series.)

MONTHLY REPORTS (NEW SERIES).

Vol. 1, Nos. 1-14, new series. October, 1883 to December, 1884. By J. R. Dodge, Statistician. Index. 1885.

CONTENTS.

No. 1. Report on condition of crops, yield of grain per acre, and on freight rates of transportation companies (with correspondence of State agents). Oct., 1883. Pp. 28.

No. 2. Report on yield of crops per acre, on the progress of sorghum growing, the crops of Europe, and on freight rates of transportation companies. Nov., 1883. Pp. 59.

No. 3. Report of the crops of the year, of cereal production in Europe, and freight rates of transportation companies. Dec., 1883. Pp. 74.

No. 4. Report upon the numbers and values of farm animals, on certain causes affecting wages of farm labor, and on freight rates of transportation companies. Feb., 1884. Pp. 56.

No. 5. Report on the distribution and consumption of corn and wheat and the rates of transportation of farm products. Mar., 1884. Pp. 44.

No. 6. Report of the area of winter grain, the condition of farm animals, and freight rates of transportation companies. Apr., 1884. Pp. 48.

No. 7. Report of the condition of winter grain, the progress of cotton planting, and estimates of cereals for 1883, with freight rates of transportation companies. May, 1884. Pp. 36.

No. 8. Report on the acreage of spring grain and cotton, the condition of winter wheat, and European grain prospects, with freight rates of transportation companies. June, 1884. Pp. 39.

No. 9. Report on the area of corn, potatoes, and tobacco, and the condition of growing crops, and on rates of transportation, July, 1884. Pp. 59.

No. 10. Report on the condition of growing crops, and on rates of transportation. Aug., 1884. Pp. 36.

No. 11. Report on condition of crops, on wheat in India, and on freight rates of transportation companies. Sept., 1884. Pp. 87.

No. 12. Report on condition of crops, yield of grain per acre, and on freight rates of transportation companies. Oct., 1884. Pp. 44.

No. 13. Report on yield of crops per acre, on agriculture in Mexico, and on freight rates of transportation companies. Nov., 1884. Pp. 94.

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[Four-page summaries of the condition, prospects, etc., of crops, and number, etc., of farm animals, issued soon after the 10th of each month, from March, 1890, to and including May, 1896.]

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1891. Oct. Of Statistical Report No. 89.
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Mar. Of Statistical Report No. 113.
Apr. Of Statistical Report No. 114.
May. Of Statistical Report No. 115.
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July. Of Statistical Report No. 117.
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1895. Jan. Of Statistical Report No. 122.
Feb. Of Statistical Report No. 123.
Mar. Of Statistical Report No. 124.
Apr. Of Statistical Report No. 125.
May. Of Statistical Report No. 126.
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Apr. Of Statistical Report No. 136.
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[Nos. 1 to 8 of this series were known as Reports, and Nos. 9 to date were Bulletins.]

No. 1. Report on Flax, Hemp, Ramie, and Jute, with Considerations upon Hemp and Flax Culture in Europe. A Report on the Ramie Machine Trials of 1889 in Paris, and the Present Status of Fiber Industries in the United States. By Charles Richard Dodge, Special Agent. Index. Pp. 104, ills. 1890. (Same as Report No. 1, Fiber Investigations, Office of Secretary.)

No. 2. Report on the Agriculture of South America, with Maps and Latest Statistics of Trade. By Almont Barnes, LL. B. Pp. 189, pls. 3. 1892.

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No. 5. Production and Distribution of the Principal Agricultural Products of the World. Pp. 205. 1893.

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No. 7. An Agricultural Survey of Wyoming. By John W. Hoyt, Former Governor of Wyoming. Pp. 72, map. 1893.

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No. 9. Production and Price of Cotton for One Hundred Years. By James L. Watkins, Special Agent. Pp. 20. 1895.

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No. 11. Number and Value of Farm Animals of the United States, and Animal Products, 1880 to 1886. Pp. 63. 1896.

No. 12. Freight Charges for Ocean Transportation of the Products of Agriculture. Oct. 1, 1895, to Oct. 1, 1896. Pp. 53. 1896.

No. 13. The Fertilizer Industry: Review of Statistics of Production and Consumption, with Abstracts of State Laws for Analysis and Sale. Prepared by George K. Holmes, Assistant Statistician, under the direction of John Hyde, Statistician. Pp. 27. 1898.

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[Published by the United States Department of Agriculture, under the supervision of the Statistician. A three-column quarto newspaper devoted to agricultural topics. It is for the benefit and information of crop correspondents exclusively, and is mailed to them only.]

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DIVISION OF VEGETABLE PHYSIOLOGY AND PATHOLOGY.

[The Mycological Section in the Division of Botany was made a section of Plant Pathology in that division July 1, 1886, and became a separate division in 1890. The annual reports are bound with the Reports of the Secretary of Agriculture, and are also issued in separate form known as author's editions.]

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Report of the Mycologist for 1886. By F. Lamson Scribner. Pp. 95-138, pls. 8, maps 3, diagram 1. 1887.

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No. 6. Bordeaux Mixture as a Fungicide. By D. G. Fairchild. Prepared under the Direction of B. T. Galloway, Chief of Division. Index. Pp. 55. 1894.

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No. 27. The Wilt Disease of Cotton and Its Control. By W. A. Orton, Associate Pathologist. Pp. 16, pls. 4. 1900.

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No. 2. Grapevine Mildew and Black Rot. Pp. 3. 1885.

No. 3. Treatment of Grape Rot and Mildew. Pp. 2. 1886.

No. 4. Treatment of the Potato and Tomato for Blight and Rot. Pp. 3. 1886.

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No. 8. Experiments in the Treatment of Pear Leaf Blight and the Apple Powdery Mildew. Pp. 11, figs. 2. 1889.

No. 9. Root-Rot of Cotton. Pp. 4. 1889.

No. 10. Treatment of Nursery Stock for Leaf Blight and Powdery Mildew. Pp. 8, figs. 2. 1891.

No. 11. Inquiry on Grape Diseases and Their Treatment. P. 1. 1891.

No. 12. Inquiry on Rust of Cereals. P. 1. 1891.

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No. 16. Danger of Introducing a Central American Coffee Disease into Hawaii. By Walter T. Swingle, Special Agent, Division of Vegetable Physiology and Pathology. Pp. 4. 1898.

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Vols. I-IV, inclusive, were not issued by the Department of Agriculture.

Vol. V., Nos. 1-4. Index. Pp. 249, pls. 14. 1889.

Vol. VI, Nos. 1-4. Index. Pp. 207, pls. 18. 1890-91.

Vol. VII, Nos. 1-4. Index. Pp. 478, pls. 38. 1891-94.

(The Journal was discontinued in 1894.)

WEATHER BUREAU.

[The meteorological service was transferred from the War Department to the Department of Agriculture July 1, 1891, in compliance with an act of Congress creating a Weather Bureau and transferring to it the meteorological duties of the Signal Service.

The following list includes the publications of this Bureau since the above date.]

ANNUAL REPORTS.

[These reports since 1891 are bound with the Annual Reports of the Secretary of Agriculture, and are also issued in separate pamphlet form.]

Report of the Chief of the Weather Bureau for 1891. By Mark W. Harrington. Pp. 359-631, pls. 4. 1892.

Reprinted from the Annual Report Secretary of Agriculture for 1891.

Report of the Chief of the Weather Bureau for 1892. By Mark W. Harrington.

Pp. i-iv, 551-626, i-ii, pls. 4. 1893.

Reprinted from Annual Report Secretary of Agriculture for 1892.

Report of the Chief of the Weather Bureau for 1893. By Mark W. Harrington.

Pp. i-iii, 89-122, pls. 4. 1894.

Reprinted from Annual Report Secretary of Agriculture for 1893.

Report of the Chief of the Weather Bureau for 1894. By Mark W. Harrington. In

Annual Report of the Secretary of Agriculture in Message and Documents for 1893-1894. Pp. 77-101.

Report of the Chief of the Weather Bureau for 1895. By Willis L. Moore. Pp. i-iii, 65-96. 1895.

Reprinted from Annual Report Secretary of Agriculture in Message and Documents for 1895.

Report of the Chief of the Weather Bureau for 1896. By Willis L. Moore. Pp. i-iii, 243-266. 1896.

Reprinted from Annual Report Secretary of Agriculture in Message and Documents for 1896.

Report of the Chief of the Weather Bureau for 1897. By Willis L. Moore. Pp. 199-218. 1897.

Reprinted from Annual Reports Department of Agriculture for 1897.

Report of the Chief of the Weather Bureau for 1898. By Willis L. Moore. Pp. 30. 1898.

Reprinted from Annual Reports Department of Agriculture for 1898.

Report of the Chief of the Weather Bureau for 1899. By Willis L. Moore. Pp. 9-24. 1899.

Reprinted from Annual Reports Department of Agriculture for 1899.

Report of the Chief of the Weather Bureau for 1900. By Willis L. Moore. Pp. 7-15. 1900.

Reprinted from Annual Reports Department of Agriculture for 1900.

SPECIAL REPORT.

Special Report of the Chief of the Weather Bureau to the Secretary of Agriculture.

A general summary of the operations of the Weather Bureau since its transfer to the Agricultural Department. By Mark W. Harrington. Pp. 26. 1891.

MISCELLANEOUS PUBLICATIONS.

Rainfall Map and Lines of River Travel, in Days, to Vicksburg. 1891.

Appendices reprinted from the Annual Report of the Chief Signal Officer for 1891:

No. 3. Part 1, Report of the Officer in Charge of the Verification of Official Forecasts; Part 2, Weather Forecasting at the Signal Office June 30, 1891. Pp. 51-60.

No. 4. Report of Forecasts of Cold Waves. Pp. 61-65.

No. 5. Report of Professor in Charge of the River and Flood Division. Pp. 67-260, map 1.

No. 6. Report of the Officer in Charge of the State Weather Services. Pp. 261-292.

No. 8. Annual Report of Data Division. Pp. 317-340.

No. 10. Report of Assistant Professor in Charge of the Instrument Division. Pp. 343-386, figs. 11.

No. 11. Report of Bibliographer and Librarian. Pp. 387-409.

No. 13. Annual Meteorological Summary for the Year ending Dec. 31, 1890. Pp. 433-533.

No. 14. Temperature Data, 1890, from Signal Service and Voluntary Observers. Pp. 535-667.

No. 15. Precipitation Data, 1890, from Signal Service and Voluntary Observers. Pp. 669-735.

No. 16. Dates of the First and Last Killing Frosts for the Season 1890-1891. Pp. 737-745.

No. 17. International Pressure and Storm Charts. Pp. 747-777, charts 26.

Cold Wave and Frost Warning Circular. 1 sheet. 1891.

Charts Showing Daily River Stages in Feet. 1892.

Rainfall Chart. Lines of Equal Time of Water Travel to Cairo, Ill. 1892.

Explanation of the Weather Charts. Single sheet. 1892.

Table Showing Depth of Precipitation Corresponding to Given Weights. 1892.

Thunderstorm Observations. Pp. 2. 1892.

Weather Code. December 1, 1892. Pp. 93. 1892.

Instructions for Special River Observers. Prepared under directions of the Chief of the Weather Bureau, by Thomas Russell, Professor of Meteorology. Pp. 50, figs. 8. 1892.

The Development and Movement of Cyclones, as Shown in the Morning and Evening Weather Maps, Apr. 2-6, 1892. Charts 9. 1892.

Instructions to Observers and Code for Enciphering Reports at Cotton Region and Sugar and Rice Stations of the Weather Bureau. Pp. i-xxvii, 3-16, figs. 10. 1892.

Cipher Code for Wind Signal Orders; Amending the Instructions to Special Displaymen. Pp. 10. 1892.

Instructions for Voluntary Observers, 1892. By T. Russell, Professor of Meteorology. Pp. 100, figs. 21. Index. 1892.

Instructions to Special Displaymen of the Weather Bureau. Pp. 13. 1892.

Tables for Obtaining the Temperature of the Dew Point, Relative Humidity, and Vapor Pressures. Prepared for use in Weather Bureau. Pp. 24. 1892.

Instructions to Operators on the United States Seacoast Telegraph Lines. Pp. 24. 1892.

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Statement of Expenditures by the Signal Service and Weather Bureau. Pp. 3. 1893.

Daily River Stages at River-Gauge Stations on the Principal Rivers of the United States, for the Years 1890, 1891, and 1892. Pp. i-lxvii, 439, charts 12. 1893.

Descriptions of River Gauges, Bench Marks, Danger Lines, Low Water and Flood Marks at United States Weather Bureau River Stations, on the Principal Rivers of the United States for the Years 1890, 1891, 1892. Pp. lxvii. 1893.
Reprinted from Daily River Stages at River-gauge stations.

Instructions to Special Rainfall Observers of the Weather Bureau. Pp. 22. 1893.

Instructions for Using the Glass Electrical Sunshine Recorder Pattern, 1893. Pp. 4, figs. 2. 1893.

Tables for Dividing by 672, 720, 744, 56, 60, 62. Records Division, Weather Bureau. Pp. 15. 1893.

Certain Climate Conditions of the Two Dakotas. Pp. 206, with maps, charts, and appendices. 1893.

Climate of Texas. (From Monthly Weather Review.) Pp. 4. November, 1893.

Rainfall Laws. Deduced from Twenty Years of Observation. By Dr. G. Hinrichs. Pp. 94, figs. 16. 1893.

Relation of Certain Atmospheric Changes to Changes in Water Level in St. Marys Falls Canal. By Mark W. Harrington, Chief of Weather Bureau. Pp. 2. 1894.

International Symbols Recommended for Use by the International Meteorological Congress, held at Munich, 1892. Included in reprint of Circular No. 16, 1883. Pp. 5. 1894.

Protection from Lightning. Pp. 20, figs. 21. 1894.
Revised and issued as Bulletin No. 15.

Instructions to Special River Observers of the Weather Bureau, 1894. By Mark W. Harrington, Chief Weather Bureau. Pp. 49, figs. 7. 1894.

Table of Monthly Amounts of Possible Sunshine for Hours Ending Shortly after Sunrise (and) Sunset. Pp. 2. 1894.

Protection of Fruits, Vegetables, and Other Food Products from Injury by Heat or Cold during Transportation. Pp. 7. 1894.

Weather Crop Service. By Mark W. Harrington, Chief of Bureau. 1895.

Display of Wind Signals on the Great Lakes. By Mark W. Harrington, Chief Weather Bureau. Pp. 13, pl. 1. 1895.

Instructions to Observers and Code for Enciphering Reports at Cotton Region and Sugar and Rice Stations of the Weather Bureau. Pp. 39, figs. 10. 1895.

Studies of Weather Types and Storms. No. 1. Types of Storms in January. By E. B. Garriott. Pp. 4, charts 25. 1895.

Weather Conditions of the Crop of 1894. September, 1895. (See Separate No. 30, Office of Secretary.)

Statement of Expenditures by the Signal Service and Weather Bureau. By Mark W. Harrington, Chief of Bureau. Pp. 2. 1895.

Instructions for Observers of the Weather Bureau. Pp. 82. 1895.

202 PUBLICATIONS, U. S. DEPARTMENT OF AGRICULTURE.

Description of Cloud Forms. Chart, 11 illus. 1895.

What Meteorology is doing for the Farmer. August, 1895. (See Separate No. 3, Office of Secretary.)

The Value of Forecasts. August, 1895. (See Separate No. 4, Office of Secretary.)

Surface Currents of the Great Lakes, as Deduced from the Movements of Bottle Papers during the Seasons of 1892, 1893, and 1894. By Mark W. Harrington, Chief of the Weather Bureau. Pp. 14, charts 6. (Revised edition.) 1895.

Statistics of State Weather Services. By O. L. Fassig, Librarian, United States Weather Bureau. Pp. 8. 1895.

The Marvin Seismograph. By C. F. Marvin. Pp. 6, figs. 2, charts 3. 1895.

Atmospheric Circulation in Tropical Cyclones, as Shown by Movement of Clouds. By H. B. Boyer, Observer at Weather Bureau, Key West, Fla. Pp. 17, pls. 17. 1896.

Some Climatic Features of the Arid Regions. By Willis L. Moore, Chief of Weather Bureau. Pp. 19, figs. 2, charts 3. 1896.

Weather Bureau Weather Code. By Willis L. Moore, Chief, Weather Bureau. Pp. 116. 1896.

Cloud Observations and an Improved Nephoscope. By C. F. Marvin; Professor of Meteorology, U. S. Weather Bureau. Pp. 12. 1896.

The Snow and Ice Charts. These charts are issued during the winter season, based upon data from regular weather observers, showing depth of snow on ground and ice in rivers and harbors. This publication has been issued from 1893 to March, 1901, inclusive, and is issued weekly from December to March.
Has been changed to Snow and Ice Bulletin.

Instructions to Wind-Signal Displaymen of the Weather Bureau. Pp. 11. 1896.

Statistics of State Weather Services. By Oliver L. Fassig, Librarian. Pp. 12. 1896.

Departures from Normal Temperatures and Rainfall, with Crop Yield in Nebraska. By Maj. H. H. C. Dunwoody, Assigned as Acting Assistant Chief of the Weather Bureau. Pp. 30, charts 10. 1896.

Injury from Frost and Methods of Protection. By W. H. Hammon, Forecast Official. Pp. 12. 1896.

Display of Wind Signals on the Great Lakes. By Willis L. Moore, Chief of the Weather Bureau. Pp. 18. 1896.

Studies of Weather Types and Storms. Pt. II. Pp. 26, charts 77. 1896.

Chart Showing the Tornado of May 27, 1896, at St. Louis, Mo. Pp. 8.

Responses to Questions at the International Meteorological Conference, Paris, September, 1896. Pp. 29. 1897.

Kite Experiments at the Weather Bureau. Pp. 115, pls. 20. 1897.

Daily River Stages at River Gauge Stations on the Principal Rivers of the United States. Part V, for the years 1893, 1894, and 1895. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official. Pp. i-lxii, 555. 1897.

Instructions for Voluntary Observers. Prepared under direction of Willis L. Moore, Chief of the Weather Bureau. Pp. 22, figs. 10. 1897.

A Monograph on the Mechanics and Equilibrium of Kites, 1897. Prepared with the Approval of Willis L. Moore, Chief of the Weather Bureau, by C. F. Marvin, Professor of Meteorology. Pp. 71, figs. 23. 1897.

The Standard System of Coordinate Axes for Magnetic and Meteorological Observations and Computations. Prepared with Approval of Willis L. Moore, Chief of the Weather Bureau, by Frank H. Bigelow, Professor of Meteorology. Pp. 7. 1897.

Wind-Barometer Table. Prepared with Approval of Willis L. Moore, Chief of the Weather Bureau, by E. B. Garriott, Professor of Meteorology. Pp. 5. 1897.

Clothing and Temperature. Prepared under Direction of Willis L. Moore, Chief of the Weather Bureau, by W. F. R. Phillips, M. D., in Charge of the Section of Climatology. Pp. 6. 1897.

Tables for Obtaining the Temperature of the Dew Point, Relative Humidity, etc. Pp. 30. 1897.

The Equations of Hydrodynamics, in a Form Suitable for Application to Problems Connected with the Movements of the Earth's Atmosphere. Prepared at the request of Willis L. Moore, Chief of the Weather Bureau, by Joseph Cottier, Columbia University. Pp. 8, figs. 3. 1897.

Instructions for Use of Aneroid Barographs on the Great Lakes. Prepared under direction of Willis L. Moore, Chief of the Weather Bureau. Pp. 7. 1897.

Instructions Governing the Corn, Wheat, Cotton, Sugar, and Rice Region Service. Pp. 9. 1897.

Instructions to Operators on the United States Seacoast Telegraph Lines. Pp. 26. 1897.

United States Daily Atmospheric Survey. By Willis L. Moore, Chief of Weather Bureau. Pp. 6. 1897.

Excessive Precipitation in the United States. By Alfred J. Henry. Pp. 3, chart. 1897.

The Climate of Alaska. By Willis L. Moore, Chief, Weather Bureau. Pp. 2. 1897.

Charts showing River System and Flood Service of the United States. 1897.

Description of Cloud Forms. Figs. 10. 1897.

Review of Weather and Crop Conditions, season of 1897. June, 1898. (See Separate No. 126, Office of Secretary.)

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Reprint from Yearbook for 1897, Office of Secretary.

Description of Cloud Forms. Chart, with 10 illustrations. 1898.

Rainfall in Nicaragua. By A. J. Henry, Chief of Division. Pp. 4. 1898.

Some Kite Experiments. By William A. Eddy, Bayonne, N. J. Pp. 7. 1898.

River and Flood Service Charts, showing the Area Covered by the Water of the Mississippi River in April, 1897. 1897.

The Probable State of the Sky along the Path of Total Eclipse of the Sun, May 28. 1900. By Frank H. Bigelow, Professor of Meteorology, under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 7, charts 7. 1897.

The Highest Kite Ascensions at Blue Hill. By S. P. Ferguson, under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 4. 1898.

Forests and Rainfall. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by H. A. Hazen, Professor of Meteorology. Pp. 7. 1898.

An Improved Sunshine Recorder. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. By D. T. Maring, Instrument Division. Pp. 15, figs. 3. 1898.

A Winter Barograph Curve from the South Pacific Ocean. By Robert De C. Ward, Instructor in Climatology, Harvard University. Pp. 6, fig. 1. 1898.

Wrecks and Casualties on the Great Lakes during 1895, 1896, and 1897. By Norman B. Conger, Local Forecast Official and Marine Agent. Under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 23, charts 3. 1898.

Normal Annual Sunshine and Snowfall. By A. J. Henry, under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 5, maps 2. 1898.

Investigation of the Cyclonic Circulation and Translatory Movement of West Indian Hurricanes. By the late Rev. Benito Vines, S. J., formerly Director of Magnetic and Meteorological Observatory of the Colegio de Balen, Habana. Pp. 34. 1898.

Moisture Tables. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. By C. F. Marvin, Professor of Meteorology. Pp. 9, fig. 1. 1898.

Aneroid Barometers. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. By C. F. Marvin, Professor of Meteorology. Pp. 30. 1898.

Instructions for Voluntary Observers. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 23, figs. 9.

The Probable State of the Sky along the Path of Total Eclipse of the Sun, May 28, 1900. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Frank H. Bigelow, Professor of Meteorology. Pp. 6, chart 1. 1899.

Climate and Crop Report of 1898, Alaska section. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. By H. L. Ball, Section Director, Sitka, Alaska. Pp. 7. 1898.

Hydrology of the Lake Minnetonka Watershed. By George W. Cooley, C. E., Minneapolis, Minn. Published by direction of Willis L. Moore, Chief of Weather Bureau. Pp. 10, figs. 4. 1898.

An Advance in Measuring and Photographing Sounds. By Benjamin F. Sharpe, M. A., Fellow in Clark University; sometime Professor in Randolph-Macon College, Virginia; Honorary Scholar in Johns Hopkins University; Professor in State Normal School at New Paltz, N. Y. Published by direction of Willis L. Moore, Chief of Weather Bureau. Pp. 18, pls. 7, figs. 3. 1898.

Variations in Lake Levels and Atmospheric Precipitation. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. By Alfred J. Henry, Chief of Division of Records and Meteorological Data. Pp. 8, diagrams 3. 1898.

Notes on Frost. 1899. (See Farmers' Bulletin No. 104, Office of Secretary.)

The Weather Map. Issued twice daily from July 1, 1891, to Sept. 30, 1895, since when it has been published daily at 8 a. m. Shows weather conditions throughout the United States, and furnishes forecasts of probable changes.

Explanation of the Weather Map. By Willis L. Moore, Chief of Weather Bureau. Pp. 3.

Weather Map for the Use of Schools. (1 large sheet.)

Ice on Lake Superior. Supplement, May, 1899, Meteorological Chart of the Great Lakes. Pp. 3. 1899.

Explanation of the North Pacific Coast Weather Map. By Willis L. Moore, Chief of Weather Bureau. Pp. 4.

The Use of Kites in the Exploration of the Upper Air. May, 1899. (See Separate No. 160, Office of Secretary.)

A Weather Bureau Kite. Pp. 5, chart 1.

Property Loss by Lightning, 1898, with Some General Directions as to the Erection of Lightning Rods. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. By Alfred J. Henry and Alexander G. McAdie. Pp. 16. 1899.

Reprinted from Bulletin No. 26.

Cyclones, Hurricanes, and Tornadoes. May, 1899. (See Separate No. 161, Office of Secretary.)

Climatology of the Isthmus of Panama. By Henry L. Abbott, brevet brigadier-general, U. S. A. (retired). Published by direction of Willis L. Moore, Chief of Weather Bureau. Pp. 19, figs. 4. 1899.

Sunshine Table 1. Local Time of Sunrise and Sunset for North Latitudes, from 25° to 49°, inclusive.

Comparison of Thermometer Scales.

Weather Map, issued formerly twice daily, now daily, showing weather conditions throughout the United States and furnishing forecasts of probable changes.

Editions published at Washington, D. C., and at various stations of the Weather Bureau outside of Washington, D. C.

Anemometer Tests. By C. F. Marvin, Professor of Meteorology. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 18, figs. 7. 1900.

Daily River Stages at River Gauge Stations on the Principal Rivers of the United States. Part VI. For the years 1896, 1897, 1898, and 1899. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. By H. C. Frankenfield, Forecast Official. Pp. 446. 1900.

Climatic Charts of the United States. In six parts: I, Washington daily weather maps. II, Normal precipitation. III, Normal sunshine. IV, Normal barometer pressure. V, Normal temperature of the air at the surface of the earth. VI, Temperature. 1900.

Tables of Daily and Monthly Precipitation. Pp. 256. August, 1900.

Work of the Meteorologist for the Benefit of Agriculture, Commerce, and Navigation. August, 1900. (See Separate No. 183, Office of Secretary.)

Amplification of Weather Forecasts. August, 1901. (See Separate No. 202, Office of Secretary.)

Pyschrometric Tables for Obtaining the Vapor Pressure, Relative Humidity, and Temperature of the Dew Point. From Readings of the Wet and Dry Bulb Thermometers. Prepared under the direction of Willis L. Moore, Chief of the Weather Bureau, by C. F. Marvin, Professor of Meteorology. Pp. 84. 1901.

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Protection of Food Products from Injurious Temperatures. 1901. See Farmers' Bulletin No. 125, Office of Secretary.)

The Theory of the Formation of Precipitation on Mountain Slopes. Pp. 8. 1901.
Reprinted from Monthly Weather Review for April, 1901.

Weather Crop Bulletin. A brief summary of the condition of weather and crops of the United States, showing by maps and tables the departures from Normal temperature and rainfall for the period covered by the bulletin. Issued weekly from March to October, inclusive, a separate monthly edition being continued throughout the year, and all issues being numbered consecutively in the order of their appearance.

- 1891. Nos. 22-39, inclusive. (Nos. 1-21, inclusive, issued by War Department.)
- 1892. Nos. 1-33, inclusive.
- 1893. Nos. 1-32, inclusive.
- 1894. Nos. 1-32, inclusive.
- 1895. Nos. 1-32, inclusive.
- 1896. Nos. 1-32, inclusive.
- 1897. Nos. 1-32, inclusive.
- 1898. Nos. 1-31, inclusive.
- 1899. Nos. 1-31, inclusive.
- 1900. Nos. 1-32, inclusive.
- 1901. Nos. 1-15, to June, inclusive.

Climate and Crop Bulletin. Reports temperature and rainfall, with special reference to their effect on crops. This bulletin has been issued from July 1, 1891, to the present time, weekly from March to October, and monthly during November, December, January, and February.

Special River Bulletins. April 2 to 29, 1897.

Brazos River Flood Bulletin. P. 1. 1899.

Daily Bulletin. Issued at Weather Bureau stations outside of Washington, D. C. Showing the weather conditions at selected stations of the Bureau, the data being telegraphed to the various observers, who enter the same and cause the bulletins to be displayed, as in case of the weather maps.

REPORTS (DATA VOLUMES).

Report of the Chief of the Weather Bureau for 1891-1892. (Devoted chiefly to tables recording climatological data for the years 1891 and 1892.) Pp. 528, pls. 4, figs. 23, 1893.

- Part I. Introduction, list of observing stations, description of instruments, and instrumental corrections; methods of reduction. Pp. 7-48, figs. 22. 1893.
- Part II. Hourly averages of atmospheric pressure, temperature, and wind, from the records of self-recording instruments at twenty-eight stations. Pp. 49-139. December, 1893.
- Part III. Monthly and annual meteorological summaries for Weather Bureau stations. Pp. 141-303. December, 1893.
- Part IV. Monthly and annual mean temperature and annual extremes of temperature, together with the dates of first and last killing frost. Pp. 305-365. December, 1893.
- Part V. Monthly and annual precipitation. All stations. Pp. 367-433. December, 1893.
- Part VI. Miscellaneous meteorological tables and reports. Pp. 435-528, pls. 4, figs. 22. December, 1893.

Report of the Chief of the Weather Bureau for 1893. (Devoted chiefly to tables recording climatological data for the year 1893.) Pp. 319, figs. 4. 1895.

- Part I. (See Data Report.)
- Part II. Hourly averages of atmospheric pressure, temperature, and wind, from the records of self-recording instruments at twenty-eight stations. Pp. 21-69. May, 1895.

Report of the Chief of the Weather Bureau for 1893—Continued.

Part III. Monthly and annual meteorological summaries for one hundred and sixty-one Weather Bureau stations. Pp. 71-155. May, 1895.

Part IV. Monthly and annual mean temperature, together with the dates of first and last killing frost. Pp. 157-190. May, 1895.

Part V. Monthly and annual precipitation. All stations. Pp. 191-228. May, 1895.

Part VI. Miscellaneous meteorological tables and reports; hourly records of self-registering instruments at Pikes Peak and Colorado Springs, Colorado; pressure, temperature, and wind; snowfall 1892-93 and 1893-94; sunshine 1893; height of water in rivers; destructive windstorms and casualties by lightning. Pp. 229-319, figs. 4. May, 1895.

Report of the Chief of the Weather Bureau for 1894. Pp. 288. 1895.

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Part II. Hourly averages of atmospheric pressure, temperature, and wind, from the records of self-recording instruments at twenty-eight stations. Pp. 1-65. 1896.

Part III. Monthly and annual meteorological summaries for one hundred and forty-nine Weather Bureau stations. Pp. 67-146. 1896.

Part IV. Monthly and annual mean temperature and annual extremes of temperature, together with the dates of first and last killing frosts. Pp. 147-182. 1896.

Part V. Monthly and annual precipitation. All stations. Pp. 183-222.

Part VI. Miscellaneous meteorological tables, etc. Pp. 223-288.

Report of the Chief of the Weather Bureau for 1895-1896. Pp. i-xl, 266, pls. 4, charts 8, figs. 5. 1897.

Introduction; Administrative report; Distribution of forecasts; Tornadoes, 1889-1896; New work; Aerial investigations. Pp. ix-xl, charts 8. 1897.

Part I. List of observing stations. Description of instruments. Instrumental corrections, etc. Pp. 10.

Part II. Hourly averages of atmospheric pressure, temperature, and wind, from the records of automatic instruments at twenty-eight stations. Pp. 11-59. January, 1897.

Part III. Monthly and annual meteorological summaries for one hundred and forty-six Weather Bureau stations. Pp. 61-137. January, 1897.

Part IV. Monthly and annual mean temperature and annual extremes of temperature, together with the dates of first and last killing frost. Pp. 139-173. January, 1897.

Part V. Monthly and annual precipitation. All stations. Pp. 175-211. April, 1897.

Part VI. Miscellaneous meteorological tables and reports. Pp. 213-232, pls. 4, figs. 5. January, 1897.

Part VII. Snowfall of the United States, 1895-1896. Pp. 233-266. January, 1897.

Report of the Chief of the Weather Bureau for 1896-1897. Pp. i-x, 431, pls. 61, charts 33. 1898.

Part I. (See Data Report.)

Part II. Hourly averages of atmospheric pressure, temperature, and wind, from the records of self-recording instruments at twenty-eight stations; Lustrum mean values of pressure, temperature, and wind, 1891-1895. Pp. 17-123. May, 1898.

Part III. Monthly and annual meteorological summaries. Pp. 125-199. May, 1898.

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Report of the Chief of the Weather Bureau for 1896-1897—Continued.

Part IV. Monthly and annual mean temperature and annual extremes of temperature, together with the dates of first and last killing frost. Pp. 201-234. May, 1898.

Part V. Monthly and annual precipitation. All stations. Pp. 235-273. May, 1898.

Part VI. Miscellaneous meteorological tables. Charts and reports illustrating the weather of 1896. Pp. 275-313, charts 22. May, 1898.

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Part I. (See Data Report.)

Part II. Hourly averages of atmospheric pressure, temperature, and wind, from the records of automatic instruments at twenty-eight stations. Pp. 87. April, 1899.

Part III. Monthly and annual meteorological summaries. Pp. 89-165. April, 1899.

Part IV. Monthly and annual mean temperature and annual extremes, together with the dates of first and last killing frost. Pp. 167-202. April, 1899.

Part V. Monthly and annual precipitation, 1897. All stations. Pp. 203-257. April, 1899.

Part VI. Miscellaneous meteorological tables, charts, and reports, illustrating the weather of 1897. Pp. 259-304, charts 21. April, 1899.

Part VII. Climate of Cuba. By W. F. R. Phillips.—Meteorological waves, and the distribution of moisture in the United States. By H. A. Hazen, Professor, Weather Bureau. Pp. 305-338, pls. 7, diagrams 9. April, 1899.

Part VIII. Floods of the Mississippi River. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official, in Charge of River and Flood service. Pp. 79, pls. 5, maps and diagrams 58. 1898. (Also published as Bulletin E.)

Report of the Chief of the Weather Bureau for 1898-1899. By Willis L. Moore.

Vol. I. Pp. 247. June, 1900.

Vol. II. Report on the International Cloud Observations. May 1, 1896, to July, 1897. Pp. 787, charts 79. November, 1900.

Part I. (See Data Report.)

Part II. Hourly averages of atmospheric pressure, temperature, and wind, from the records of automatic instruments at twenty-eight stations. Pp. 15-69. July, 1900.

Part III. Monthly and annual meteorological summaries. Pp. 71-153. July, 1900.

Part IV. Monthly annual mean temperature and annual extremes of temperature, together with the dates of first and last killing frost. Pp. 155-190. July, 1900.

Report of the Chief of the Weather Bureau, 1899-1900. By Willis L. Moore. Pp. 436. May, 1901.

Part I. (See Data Report.)

Part II. Hourly averages of atmospheric pressure, temperature, and wind, from the records of automatic instruments at twenty-eight stations. Pp. 17-71. April, 1901.

Part III. Monthly and annual meteorological summaries. Pp. 73-161. April, 1901.

Part IV. Monthly and annual temperature and annual extremes of temperature, together with the dates of first and last killing frost, 1899. Pp. 163-199. April, 1901.

Report of the Chief of the Weather Bureau, 1899-1900—Continued.

- Part V. Monthly and annual precipitation, 1899. All stations. Pp. 201-258. April, 1901.
- Part VI. Miscellaneous meteorological tables and reports. Pp. 250-347. April, 1901.
- Part VII. Meteorological observations of the second Wellman expedition, by Evelyn B. Baldwin, observer, Weather Bureau. Pp. 349-436. April, 1901.

BULLETINS (NUMBERED).

- No. 1. Notes on the Climate and Meteorology of Death Valley, California. By Mark W. Harrington, Chief of the Weather Bureau. Pp. 50, figs. 10. 1892.
- No. 2. Notes on a New Method for the Discussion of Magnetic Observations. By Frank H. Bigelow, Professor of Meteorology. Pp. 41, pl. 1. 1892.
- No. 3. A Report on the Relation of Soil to Climate. By E. W. Hilgard, Professor of Agriculture and Agricultural Chemistry, University of California. Pp. 59. 1892.
- No. 4. Some Physical Properties of Soils in their Relation to Moisture and Crop Distribution. By Milton Whitney, Professor of Geology and Soil Physics, Maryland Agricultural College; Physicist, Maryland Agricultural Experiment Station; Fellow by Courtesy, Johns Hopkins University. Pp. 90. 1892.
- No. 5. Observations and Experiments on the Fluctuations in the Level and Rate of Movement of Ground Water on the Wisconsin Agricultural Experiment Station Farm and at Whitewater, Wis. By Franklin H. King, Professor of Agricultural Physics, University of Wisconsin; Physicist, Wisconsin Agricultural Experiment Station. Pp. 75, pls. 6, figs. 37. 1892.
- No. 6. The Diurnal Variation of Barometric Pressure. By Frank N. Cole, Ph. D., Assistant Professor of Mathematics, University of Michigan. Pp. 32. 1892.
- No. 7. Report of the First Annual Meeting of the American Association of State Weather Services. (Cooperating with the Weather Bureau, U. S. Department of Agriculture.) Pp. 49, figs. 6. 1893.
- No. 8. Report on the Climatology of the Cotton Plant. By P. H. Mell, Ph. D., Professor of Geology and Botany in Alabama Polytechnic Institute; Director Alabama Weather Service. Pp. 68, charts 7. 1893.
- No. 9. Report on the Forecasting of Thunderstorms during the Summer of 1892, by N. B. Conger, Inspector, Weather Bureau. Pp. 54, charts 6. 1895.
- No. 10. The Climate of Chicago. By Henry A. Hazen, Professor of Meteorology. Pp. 137, figs. 26. 1893.
- No. 11. Report of the International Meteorological Congress, held at Chicago, Ill., Aug. 21-24, 1893. Part I, pp. 206, 1894. Part II, pp. 377, 1895. Part III, pp. 188, 1896.
- No. 12. Report on the Condensation of Atmospheric Moisture. By Carl Barus. Pp. 104, pls. 4. 1895.
- No. 13. Temperatures Injurious to Food Products in Storage and during Transportation, and Methods of Protection from the Same. By H. E. Williams, Chief of the Forecast Division, Weather Bureau. Pp. 20. 1894.
- No. 14. Report of the Third Annual Meeting of the American Association of State Weather Services, cooperating with the Weather Bureau, U. S. Department of Agriculture. Pp. 31. 1894.

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- No. 15. Protection from Lightning. By Alexander G. McAdie, Weather Bureau. Pp. 26. 1895.
- No. 16. The Determination of the Relative Quantities of Aqueous Vapor in the Atmosphere by Means of the Absorption Lines of the Spectrum. By L. E. Jewell, under the general supervision of Prof. H. A. Rowland. Pp. 12, fig. 1. 1896.
- No. 17. The Work of the Weather Bureau in Connection with the Rivers in the United States. Pp. 106, diagrams 3. 1896.
- No. 18. Report of the Fourth Annual Meeting of the American Association of the State Weather Services. Coöoperating with the Weather Bureau, U. S. Department of Agriculture, held at Indianapolis, Ind., Oct. 16 and 17, 1895. Pp. 55. 1896.
- No. 19. Report on the Relative Humidity of Southern New England and Other Localities. Prepared under the direction of Willis L. Moore, Chief of Weather Bureau, by Alfred J. Henry, Chief of Division. Pp. 23, pls. 4. 1896.
- No. 20. Storms, Storm Tracks, and Weather Forecasting. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Frank H. Bigelow, Professor of Meteorology. Pp. 87, charts 20. 1897.
- No. 21. Abstract of a Report on Solar and Terrestrial Magnetism in their Relation to Meteorology. By Frank H. Bigelow, Professor of Meteorology, under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 176, charts 39. 1898.
- No. 22. Climate of Cuba. Also a Note on the Weather of Manila. By W. F. R. Phillips, in charge of Section of Climatology. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 23. 1898.
- No. 23. Frost: When to Expect it and How to Lessen the Injury Therefrom. By W. H. Hammond, Professor of Meteorology. Under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 37. 1899.
- No. 24. Proceedings of the Convention of Weather Bureau Officials held at Omaha, Nebr., Oct. 13 and 14, 1898. Prepared under the direction of Willis L. Moore, Chief of the Weather Bureau. Edited by James Berry, Chief of Climate and Crop Division, Secretary of the Convention. Pp. 184. Pl. 1. 1899.
- No. 25. Weather Forecasting: Some Facts Historical, Practical, and Theoretical. By Willis L. Moore, Chief of Weather Bureau. Pp. 16. 1899.
- No. 26. Lightning and the Electricity of the Air. In two parts. By Alexander G. McAdie and Alfred J. Henry. Prepared under direction of Willis L. Moore, Chief of the Weather Bureau. Pp. 74, pls. 4, figs. 19. 1899.
- No. 27. The Probable State of Sky Along the Path of Total Eclipse of the Sun, May 28, 1900. Observations of 1899. Prepared under direction of Willis L. Moore, Chief of U. S. Weather Bureau, by Frank H. Bigelow, Professor of Meteorology. Pp. 23, charts 4. 1899.
- No. 28. The Climate of San Francisco, Cal. Prepared under the direction of Willis L. Moore, Chief, U. S. Weather Bureau, by Alexander G. McAdie and George H. Willson. Pp. 30, charts 5. 1900.
- No. 29. Frost Fighting. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Alexander G. McAdie, Forecast Official. Pp. 15, figs. 9. 1900.

BULLETINS (LETTERED).

Bulletin A. Summary of International Meteorological Observations. Pp. 10, charts 61. 1893.

Bulletin B. Currents of the Great Lakes as Deduced from the Movements of Bottled Papers during the Seasons of 1892 and 1893. Pp. 6, charts 6. 1894.

Bulletin B. Surface Currents of the Great Lakes as Deduced from the Movements of Bottled Papers during the Seasons of 1892, 1893, and 1894. By Mark W. Harrington, Chief of Weather Bureau. Revised edition. Pp. 14, charts 6. 1895.

Bulletin C. Atlas. Rainfall and Snow of the United States, Compiled to the End of 1891, with Annual, Seasonal, Monthly, and Other Charts. By Mark W. Harrington, Chief of Weather Bureau. Pp. 80, fig. 1. 1894.

Bulletin C. Rainfall and Snow of the United States, Compiled to the End of 1891, with Annual, Seasonal, Monthly, and Other Charts. By Mark W. Harrington, Chief of Weather Bureau. Pp. 80, fig. 1. 1895.

Bulletin D. Rainfall of the United States, with Annual, Seasonal, and Other Charts. By Alfred J. Henry, Chief of Division, under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 58, pls. 3, charts 11. 1897.

Bulletin E. Floods of the Mississippi River. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge of River and Flood service. Pp. 79, pls. 5, maps and diagrams 58. 1898.

Bulletin F. Vertical Gradients of Temperature, Humidity, and Wind Direction. A Preliminary Report on the Kite Observations of 1898. Prepared under the direction of Willis L. Moore, Chief of Weather Bureau, by H. C. Frankenfield, Forecast Official. Pp. 71, pls. 4, figs. 6. 1899.

Bulletin G. Atmospheric Radiation: A Research Conducted at the Allegheny Observatory and at Providence, R. I. Submitted to Willis L. Moore, Chief of Weather Bureau, by Frank W. Very. Pp. 134. 1900.

Bulletin H. West Indian Hurricanes. By E. B. Garriott, Professor of Meteorology. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 69, charts 7. 1900.

STORM BULLETINS.

[Issued whenever severe storms pass across the region of the Great Lakes during the season of navigation, and furnished for distribution to observers at all Weather Bureau stations on the lakes.]

No. 1. Storm of October 4-7, inclusive, 1893.

No. 2. Storm of October 5-14, inclusive, 1893.

No. 3. Storm of November 16-17, inclusive, 1893.

No. 4. Storm of November 20-23, inclusive, 1893.

No. 5. Storm of December 14-16, inclusive, 1893.

Lake Storm Bulletin No. 1. Storm of May 17-18, 1894.

Storm Bulletin No. 2, of 1894. West Indian Hurricane of September 24-29, 1894. 1894.

Storm Bulletin No. 3, 1894. Tropical Hurricane of October 8-10, 1894.

Storm Bulletin No. 1, 1895. Storm and Cold Wave of February 5-8, 1895.

Storm Bulletin No. 2, 1895. Lake Storm of November 25-26, 1895, chart. 1895.

Storm Bulletin No. 3, 1895. Atlantic Coast Storms of December 9-12 and 12-15, 1895' chart. 1895.

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Cold Wave Bulletin No. 1. Cold Wave of January 2-5, 1896, chart. 1896.

Storm Bulletin No. 1, 1896. Coast Storm of February 5-7, 1896, chart. 1896.

Storm Bulletin No. 2, 1896. Coast Storm of March 10-12, 1896, chart. 1896.

Storm Bulletin No. 3, 1896. Inland and Coast Storm of March 16-20, 1896, chart. 1896.

Storm Bulletin No. 4, 1896. Tornadoes of the Central Mississippi Valley, May 27, 1896, chart. 1896.

Storm Bulletin No. 5, 1896. Hurricane of September 29-30, 1896. 1896.

Storm Bulletin No. 1, 1898. Rain, Snow, and Wind Storm of January 24-26, 1898. 1898.

Storm Bulletin No. 1, 1899. The West Indian Hurricane of August 7-14, 1899. P. 1. 1899.

Storm Bulletin No. 1, 1900. West Indian Hurricane, September 1-10, 1900.

CIRCULARS (NUMBERED).

Circulars 1, 2, 3, Sanitary Climatology. Circulars of information. Single sheets.

No. 4. Sanitary Climatology. Information relative to the investigation of the influence of climate on health. By Mark W. Harrington, Chief of Weather Bureau. Pp. 7. 1895.

CIRCULARS (INSTRUMENT DIVISION, FORMERLY INSTRUMENT ROOM).

Circular A. Instructions for Obtaining and Transcribing Records from Recording Instruments. Pp. 12. 1892.

Circular A. Instructions for Obtaining and Transcribing Records from Recording Instruments. By C. F. Marvin, Professor of Meteorology, under direction of the Chief of Weather Bureau. Pp. 40, figs. 3. (Revised edition.) 1894.

Circular A. Instructions for Obtaining and Tabulating Records from Recording Instruments. Pp. 31, figs. 2. 1898.

Circular B. Directions for Use of Maximum and Minimum Thermometers. Pp. 10. 1892.

Circular B. Instructions for Use of Maximum and Minimum Thermometers. (Revised edition.) Pp. 16, figs. 7. 1895.

Circular C. Instructions for Use of the Rain Gauge. Pp. 8, figs. 3. 1892.

Circular C. Instructions for Use of the Rain Gauge. (Revised edition.) Pp. 2. 1895.

Circular D. Anemometry. A Circular of General Information Respecting the Theory and Operation of Typical Instruments for Indicating, Measuring, and Automatically Recording Wind Movement and Direction, with Detailed Instructions for the Erection and Care of Those Instruments of the Weather Bureau Pattern. Pp. 40, figs. 18. 1893.

Circular D. Anemometer. A Circular of General Information Respecting the Theory and Operation of Instruments for Indicating, Measuring, and Automatically Recording Wind Movements and Direction, with Instructions for the Erection and Care of Such Instruments of the Weather Bureau Pattern. By C. F. Marvin, Professor of Meteorology. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 67, figs 28. (Second edition). 1901.

Circular E. Instructions for Using Marvin's Weighing Rain and Snow Gauge. Pp. 16, figs. 5. 1893.

Circular E. Measurement by Precipitation. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by C. F. Marvin, Professor of Meteorology. Pp. 28, figs. 10. 1899.

Circular F. Barometers and the Measurement of Atmospheric Pressure, etc. Pp. 74. 1894.

Circular F. Barometers and the Measurement of Atmospheric Pressure. By C. F. Marvin, Professor of Meteorology. Prepared under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 84, figs. 23. (Second edition.) 1901.

Circular G. Instructions for the Care and Management of Sunshine Recorders. Pp. 18, figs. 5. 1890.

Circular G. Instructions for the Use of Combined Maximum and Minimum Soil Thermometers. Prepared by Professors C. F. Marvin and Milton Whitney, under the direction of the Chief of Weather Bureau. Pp. 8, figs. 2. 1894.

Circular H. Instructions for the Use of Maximum and Minimum Radiation Thermometers. Prepared by Professors C. F. Marvin and Milton Whitney, under the direction of the Chief of Weather Bureau. Pp. 10, figs. 5. 1894.

Circulars I and J. Not published.

Circular K. Instructions for Aerial Observers. By C. F. Marvin, Professor of Meteorology, under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 33, figs. 18. 1898.

CLIMATE AND HEALTH.

[Vol. II, No. 3 (four weeks ended Mar. 28, 1896), issued June 30, 1896, was the last issue of Climate and Health.]

Vol. 1, No. 1. A Summary of Statistics for the four weeks ended July 27, 1895. Edited by W. F. R. Phillips, M. D., under the direction of Willis L. Moore, Chief of Weather Bureau. Pp. 25, charts 20. 1895.

Vol. 1, No. 2. A Summary of Statistics for the five weeks ended Aug. 31, 1895. Edited by W. F. R. Phillips, M. D., under the direction of Willis L. Moore, Chief of Weather Bureau. Pp. 27-58, charts 25. 1895.

Vol. 1, No. 3. A Summary of Statistics for the four weeks ended Sept. 28, 1895. Edited by W. F. R. Phillips, M. D., under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 59-82, charts 20. 1895.

Vol. 1, No. 4. A Summary of Statistics for the four weeks ended Oct. 26, 1895. Edited by W. F. R. Phillips, M. D., under the direction of Willis L. Moore, Chief of Weather Bureau. Pp. 83-107, charts 20. 1895.

Vol. 1, No. 5. A Summary of Statistics for the five weeks ended Nov. 30, 1895. Edited by W. F. R. Phillips, M. D., under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 109-145, charts 24. 1896.

Vol. 1, No. 6. A Summary of Statistics for the four weeks ended Dec. 28, 1895. Edited by W. F. R. Phillips, M. D., under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 147-174, charts 12. March, 1896.

Vol. II, No. 1. A Summary of Statistics for five weeks ended Feb. 1, 1896. Edited by W. F. R. Phillips, M. D., under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 35, charts 14. April, 1896.

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Vol. II, No. 2. A Summary of Statistics for the four weeks ended Feb. 29, 1896. Edited by W. F. R. Phillips, M. D., under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 37-64, charts 12. June, 1896.

Vol. II, No. 3. A Summary of Statistics for the four weeks ended Mar. 28, 1896. Edited by W. F. R. Phillips, M. D., under direction of Willis L. Moore, Chief of Weather Bureau. Pp. 65-92, charts 12. July, 1896.

MONTHLY WEATHER REVIEW.

[A summary, by months, of weather conditions throughout the United States, based upon reports of nearly 3,000 regular and volunteer observers.]

Vol. 19. Monthly Weather Review for 1891, including Annual Summary for the year 1891.

Vol. 20. Monthly Weather Review for 1892, including the Annual Summary for the year 1892.

Vol. 21. Monthly Weather Review for 1893, including the Annual Summary for the year 1893.

Vol. 22. Monthly Weather Review for 1894, including the Annual Summary for the year 1894.

Vol. 23. Monthly Weather Review for 1895, including the Annual Summary for the year 1895.

Vol. 24. Monthly Weather Review for 1896, including the Annual Summary for the year 1896.

Vol. 25. Monthly Weather Review for 1897, including the Annual Summary for the year 1897.

Vol. 26. Monthly Weather Review for 1898, including the Annual Summary for the year 1898.

Vol. 27. Monthly Weather Review for 1899, including the Annual Summary for the year 1899.

Vol. 28. Monthly Weather Review for 1900, including the Annual Summary for the year 1900.

Vol. 29. Monthly Weather Review for January to June, 1901.

RIVER AND FLOOD SERVICE.

[The publication of the monthly bulletin of the River and Flood Service was discontinued with the issue for October, 1898. (L. R. 9863, 1898.)]

* Monthly Report of the River and Flood Service for September, 1897. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge River and Flood Service. Pp. 11, chart 1. November, 1897.

* Monthly Report of the River and Flood Service for October, 1897. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge River and Flood Service. Pp. 11, chart 1. January, 1898.

* Monthly Report of the River and Flood Service for November, 1897. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge River and Flood Service. Pp. 13, chart 1. January, 1898.

* Also known as Bulletins.

Monthly Report of the River and Flood Service for December, 1897. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge River and Flood Service. Pp. 13, chart 1. February, 1898.

Monthly Report of the River and Flood Service for January, 1898. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge River and Flood Service. Pp. 18, chart 1. February, 1898.

Monthly Report of the River and Flood Service for February, 1898. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge River and Flood Service. Pp. 14, chart 1. April, 1898.

Monthly Bulletin of the River and Flood Service for March, 1898. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge River and Flood Service. Pp. 19, chart 1. April, 1898.

Monthly Bulletin of the River and Flood Service for April, 1898. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge River and Flood Service. Pp. 30, chart 1. May, 1898.

Monthly Bulletin of the River and Flood Service for May, 1898. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge River and Flood Service. Pp. 14, chart 1. June, 1898.

Monthly Bulletin of the River and Flood Service for June, 1898. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by Park Morrill, Forecast Official in Charge River and Flood Service. Pp. 14, chart 1. July, 1898.

Monthly Bulletin of the River and Flood Service for July, 1898. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by E. B. Garriott, Professor in Charge of Forecast Division. Pp. 13, chart 1. August, 1898.

Monthly Bulletin of the River and Flood Service for August, 1898. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by E. B. Garriott, Professor in Charge of Forecast Division. Pp. 15, chart 1. October, 1898.

Monthly Bulletin of the River and Flood Service for September, 1898. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by E. B. Garriott, Professor in Charge of Forecast Division. Pp. 15, chart 1. November, 1898.

Monthly Bulletin of the River and Flood Service for October, 1898. Prepared under direction of Willis L. Moore, Chief of Weather Bureau, by H. C. Frankenfield, Forecast Official. Pp. 16, chart 1. December, 1898.

THE GREAT LAKES CHARTS.

Section Map of the Great Lakes.

Current Chart of the Great Lakes. 1893.

Wreck Chart of the Great Lakes, showing the Location of Wrecks Occasioned through Founderings, Gales of Wind, Fogs, and General Stormy Weather Conditions from 1886 to 1893.

Report of Wrecks which Occurred on the Great Lakes from Dec. 17, 1885, to Nov. 15, 1893. Pp. 24. 1894.

Wreck and Casualty Chart of the Great Lakes, 1894.

Meteorological Chart of the Great Lakes for October, 1897.

Meteorological Chart of the Great Lakes for November, 1897.

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Meteorological Chart of the Great Lakes for December, 1897

Meteorological Chart of the Great Lakes for April, 1898.

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Meteorological Chart of the Great Lakes for December, 1899.

Meteorological Chart of the Great Lakes. Summary for the season of 1899. Prepared under the direction of Willis L. Moore, Chief of Weather Bureau, by Alfred J. Henry and Norman B. Conger. Vol. II, No. 9. Pp. 29, charts 12. 1899.

Meteorological Chart of the Great Lakes for May, 1900.

Meteorological Chart of the Great Lakes for June, 1900.

Meteorological Chart of the Great Lakes for July, 1900.

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Meteorological Chart of the Great Lakes for October, 1900.

Meteorological Chart of the Great Lakes for November, 1900.

Meteorological Chart of the Great Lakes for December, 1900.

Meteorological Chart of the Great Lakes, Vol. III, No. 10. By Alfred J. Henry and Norman B. Conger. Prepared under the direction of Willis L. Moore, Chief of Weather Bureau. Pp. 23, charts 14. 1901.

Meteorological Chart of the Great Lakes No. 1, 1901. By Alfred J. Henry and Norman B. Conger. Prepared under the direction of Willis L. Moore, Chief of Weather Bureau. Pp. 28, charts 4. 1901.

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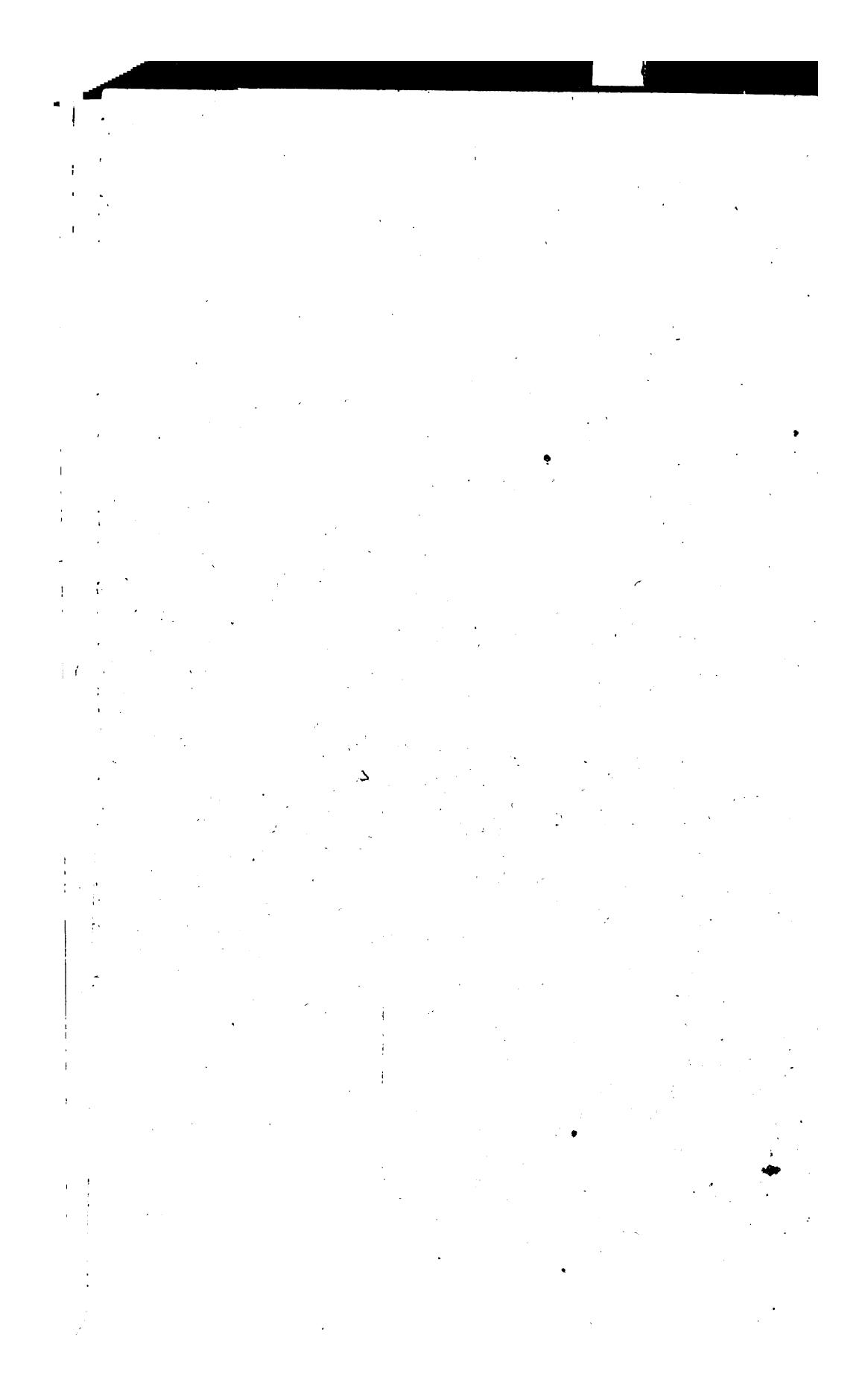
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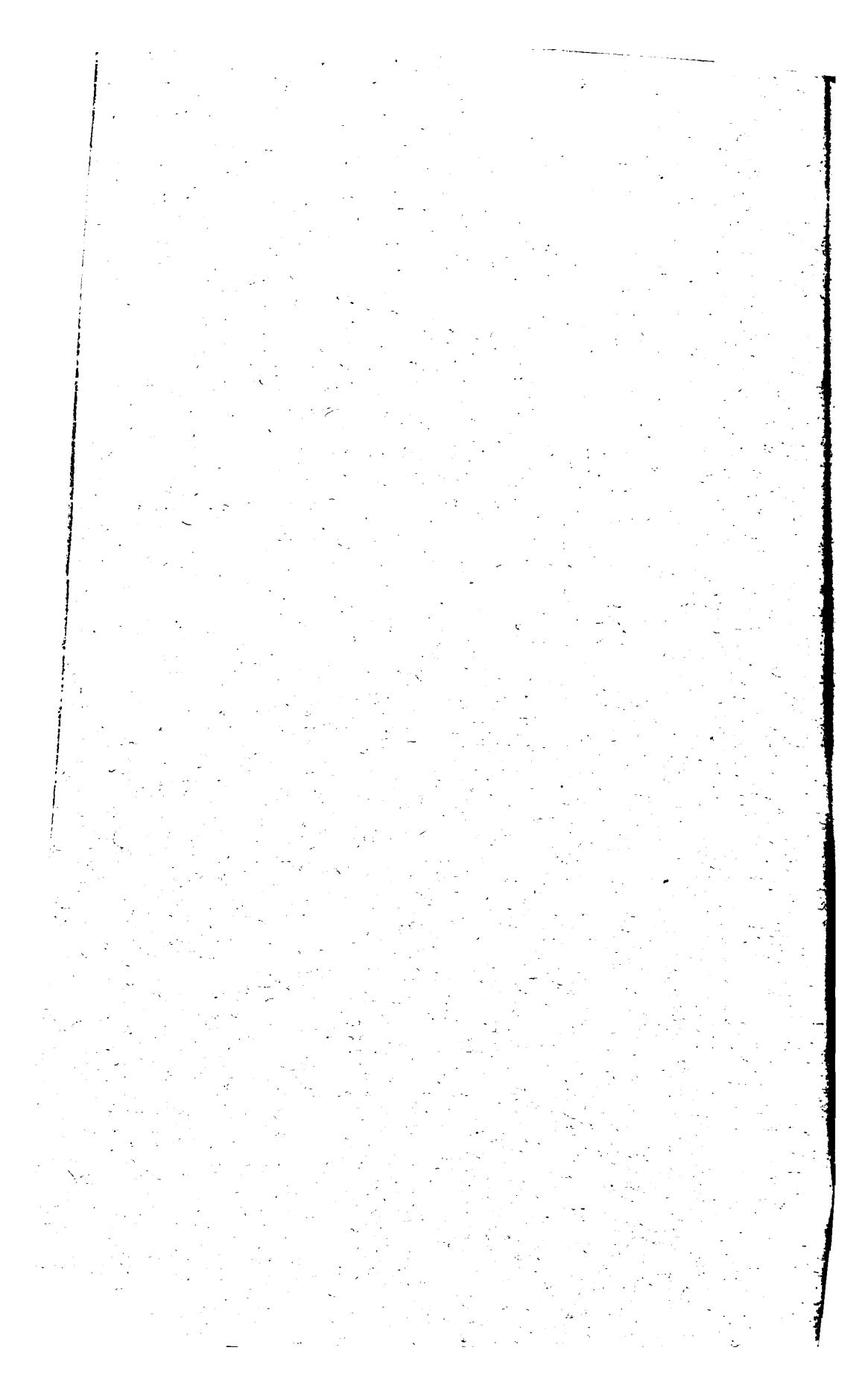


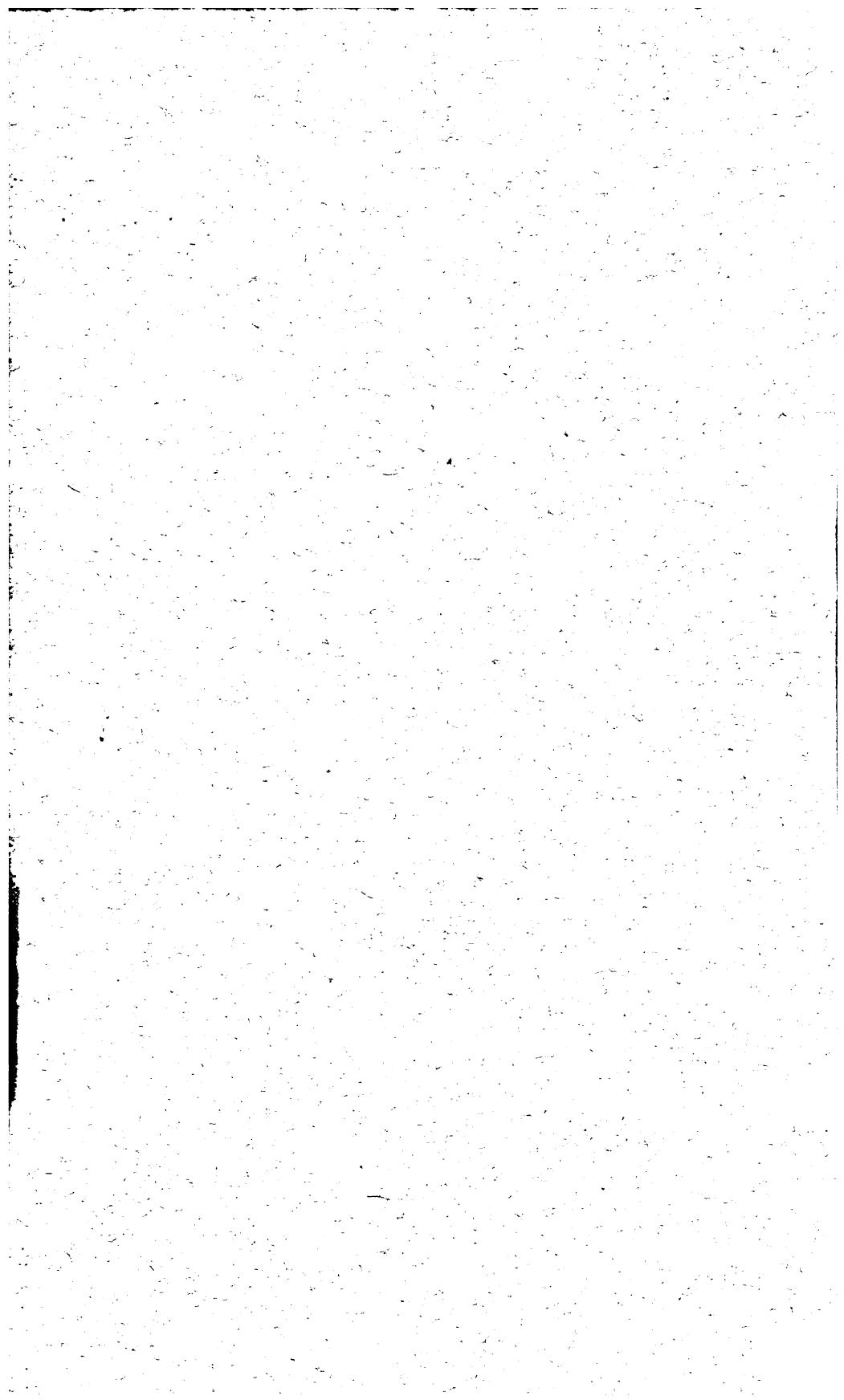
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